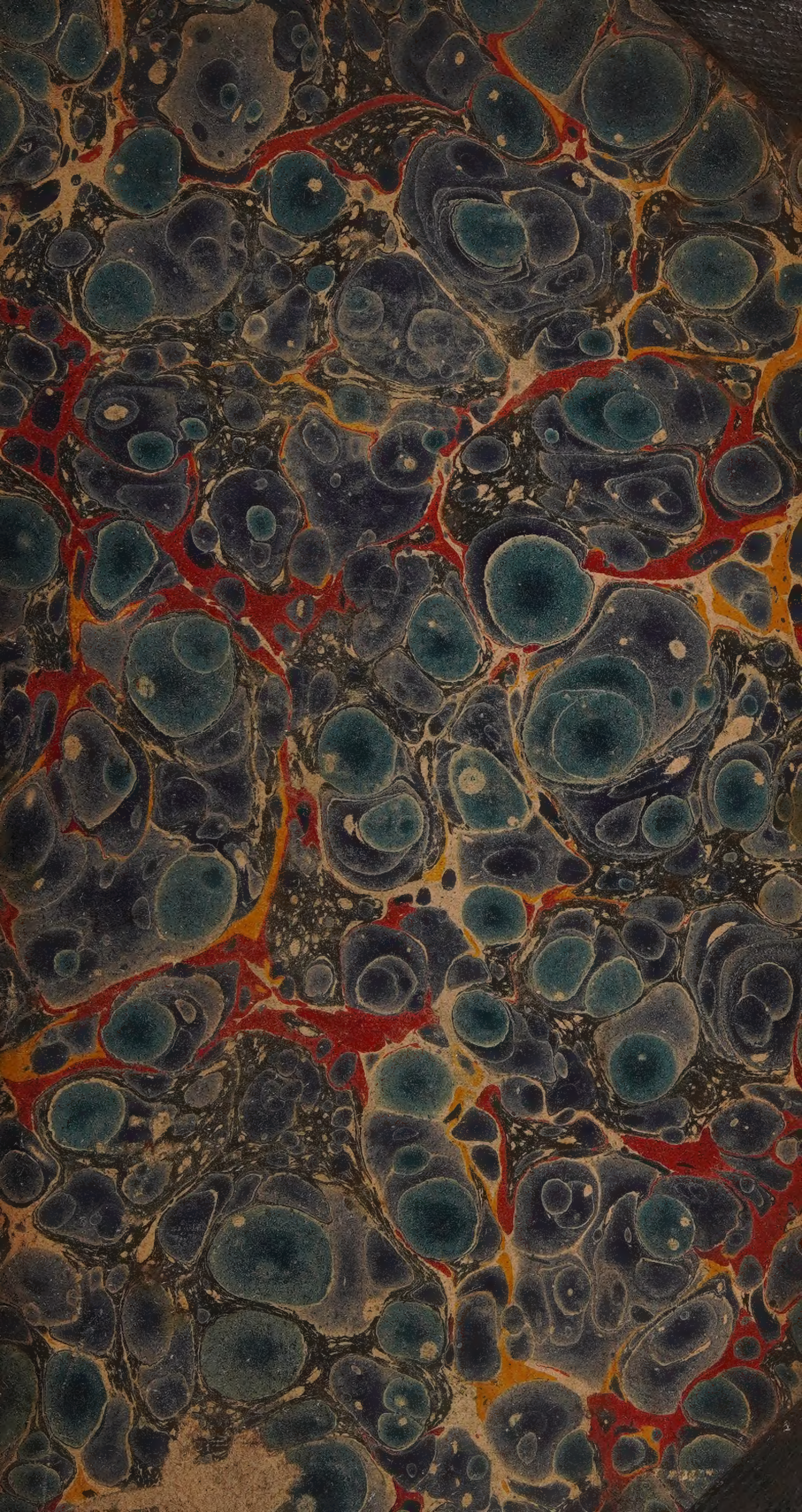

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THE DUBLIN
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THE DUBLIN
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CONSISTING OF
ORIGINAL COMMUNICATIONS,
REVIEWS, RETROSPECTS, AND REPORTS,
INCLUDING THE
LATEST DISCOVERIES IN MEDICINE, SURGERY, AND THE COLLATERAL SCIENCES.

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BOOKS RECEIVED.

1. Clinical Lectures on Paralysis and Disease of the Brain, and other Affections of the Nervous System. By R. B. Todd, M. D., F.R.S., &c. London: Churchill, 1854. Fcap. 8vo. pp. 462.

2. Third Annual Report of the Wilts County Asylum, Devizes, for the Year 1853. Pamphlet, pp. 42.

[*In our next.*]

3. The Census of Ireland for the Year 1851. Part III. Report on the Status of Disease. Parliamentary Report. Dublin. Folio, pp. 252.

4. Medical Charities, Ireland. Second Annual Report of the Commissioners for Administering the Laws for the Relief of the Poor in Ireland. Dublin, 1854. 8vo. pp. 252.

5. Expériences sur les Injections de Perchlorure de Fer dans les Artères. Par MM. Goubaux et Giraldès. 1854. Pamphlet, pp. 7.

[*An excellent Report on the effects produced in coagulating the blood by the injection of Perchloride of Iron into the arteries.*]

6. A Short Exposition of the Circulation and Nervous System, with reference to Disease and Treatment. By G. H. Bell, F. R. C. S. E., &c. Edinburgh: Maclachlan and Stewart, 1854. 8vo. pp. 67.

[*In our next.*]

7. Psychological Inquiries. In a series of Essays intended to illustrate the Mutual Relations of the Physical Organization and the Mental Faculties. London: Longmans, 1854. Fcap. 8vo. pp. 264.

[*In our next.*]

8. A Treatise on the Cure of Stammering, &c. With a Memoir of the late Thomas Hunt. By J. Hunt, M. R. S. L. London: Longmans, 1854. 8vo. pp. 80.

[*This is merely a puff; no account of the method of cure adopted by the author or his father being given.*]

9. Surgical Anatomy. By Joseph Maclise, F. R. C. S. Second Edition. London: Churchill, 1854. Fasciculus IV.

10. Vertigo. A Paper read to the North London Medical Society. By J. R. Reynolds, M. D., &c. London: Churchill, 1854. Pamphlet, pp. 46.

11. Epilepsy and other Affections of the Nervous System which are marked by Tremour, Convulsion, or Spasm: their Pathology and Treatment. By C. B. Radcliffe, M. D., &c. London: Churchill, 1854. 8vo. pp. 144.

[*We really find so much difficulty in understanding the author's views, or his intention in publishing this volume, that we must refrain from offering an opinion upon it.*]

12. Manual of Diseases of the Skin: from the French of Cazenave. With Notes and Additions. By J. H. Burgess, M. D., &c. Second Edition. London: Renshaw, 1854. Fcap. 8vo. pp. 452.

13. Suggestions for the future Provision of Criminal Lunatics. By W. C. Hood, M. D., &c. London: Churchill, 1854. 8vo. pp. 174.

[*In our next.*]

14. The Microscope, and its Application to Clinical Medicine. By Lionel Beale, M. B., &c. London: Highley, 1854. 12mo. pp. 303.

15. Thoughts on Uræmia. By G. S. Bedford, M. D., &c. New York. Pamphlet, pp. 20.

16. Sixth Report of the Somerset County Pauper Lunatic Asylum, 1853. Wells, 1854. Pamphlet, pp. 75.

[*In our next.*]

17. On the Displacements of the Uterus. By J. Matthews Duncan, M. D., &c. Edinburgh: Sutherland and Knox, 1854. Pamphlet, pp. 43.

18. Traité des Maladies du Sein et de la Région Mammaire. Par M. A. Velpeau, Professeur à la Faculté de Médecine de Paris, Chirurgien de l'Hôpital de la Charité, etc. Paris: Victor Masson, 1854. 8vo. pp. 380.

19. Traité de l'Epilepsie. Histoire, Traitement, Médecine Légale. Par le Docteur Delasiauve, Médecin de l'Hospice des Aliénés de Bicêtre. Ouvrage dont la partie Thérapeutique a été couronnée par l'Institut (Académie des Sciences). Paris: Victor Masson, 1854. 8vo. pp. 560.

20. Traité Pratique des Maladies de la Peau. Par Alph. Devergie, Médecin de l'Hôpital, Saint Louis, &c. Paris: Victor Masson, 1854. 8vo. pp. 736.

[*We shall review this volume, together with several others recently published on Diseases of the Skin, in a future Number.*]

21. A Treatise on Hooping-Cough: its Complications, Pathology, and Terminations, with its successful Treatment by a New Remedy. By G. D. Gibb, M. D., &c. London: Renshaw, 1854. 12mo. pp. 395.

22. Case of Strangulation of the Jejunum released by Gastrotomy; with Observations on the Diagnosis and Treatment of Intestinal Obstructions within the Abdomen. By J. Ridge, M. D. London, 1854. Pamphlet, pp. 20.

23. Result of an Inquiry into the Invariable Existence of a Premonitory Diarrhœa in Cholera; in a Series of Communications to the Registrar-General. By D. Macloughlin, M. D., &c. London: Churchill, 1854. Pamphlet, pp. 61.

24. The Baths of France, Central Germany, and Switzerland. By Edwin Lee. Third Edition; with considerable alterations. London: Churchill, 1854. Fcap. 8vo. pp. 207.

[*A new edition of one of Mr. Lee's excellent guides to the Continental Baths.*]

25. Six Lectures on the Pathology of Strabismus and its Treatment by Operation, delivered at the Westminster Hospital. By C. Holthouse, F. R. C. S. E., &c. London: Churchill, 1854. 8vo. pp. 116.

26. The Diseases of the Fœtus in Utero (not including Malformations), with an Outline of Fœtal Development. By Henry Madge, M. D., &c. London: Renshaw, 1854. 12mo. pp. 200.

[*In our next.*]

27. The Cyclopædia of Anatomy and Physiology. Edited by R. B. Todd, M. D., F. R. S., &c. London: Longmans, 1854. Part XLIV.

28. Twenty-fourth Annual Report of the Belfast District Hospital for the Insane, 1854. Pamphlet, pp. 41.

[*In our next.*]

29. The Effects of Civilization on the Fortunes of the Medical Profession. An Address read before the Medical Society of Southampton. By Henry Dayman, M. R. C. S. E. London: Highley, 1854. Pamphlet, pp. 30.

[*An able and sensible Address; nevertheless, we cannot subscribe to all the views propounded by the author.*]

30. Annual Report of the Royal Edinburgh Asylum for the Insane for the Year 1853. Pamphlet, pp. 50.

31. Introductory Lecture delivered to the Class of Military Surgery in the University of Edinburgh, May 2, 1854. By Sir George Ballingall, M. D., &c. Pamphlet, pp. 9.

[*Containing an Outline of the Foundation, History, and Vicissitudes of the Chair of Military Surgery in the University of Edinburgh, delivered in Sir George Ballingall's terse and vigorous style. This Lecture is of especial interest now that similar Professorships are about to be established in London and Dublin.*]

32. Anatomical and Physiological Observations. By John Struthers, M. D., &c. Part I. Edinburgh: Sutherland and Knox, 1854. 8vo. pp. 239.

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33. Sur les Avantages des Bougies Tortillées et Crochues dans les Rétrécissemens et Angusties de l'Urètre, difficiles a franchir. Par le Dr. Leroy-d-Etioles. Paris: J. B. Baillière, 1852. Pamphlet, pp. 32.

34. The Anatomist's Vade-Mecum. A System of Human Anatomy. By Erasmus Wilson, F. R. S. Sixth Edition. London: Churchill, 1854. Fcap. 8vo. pp. 698.

[*In preparing this—the sixth edition of his Anatomist's Vade-Mecum—the author has had the able assistance of Professor Retzius of Stockholm, and we consequently find the work improved in several parts. The rapid appearance of so many editions is sufficient proof of the favour which it has so deservedly met with from the anatomical student.*]

35. Sudden Death. By A. B. Granville, F. R. S., &c. London: Churchill, 1854. 12mo. pp. 286.

[*In our next.*]

36. Gout: its History, its Causes, and its Cure. By W. Gairdner, M. D. Third Edition. London: Churchill, 1854. 12mo. pp. 400.

[*We have received with much pleasure this new and improved edition of Dr. Gairdner's able Essay on Gout, which is now considerably enlarged.*]

37. Lettsomian Lectures on Insanity. By Forbes Winslow, M. D., D. C. L., &c. London: Churchill, 1854. 8vo. pp. 160.

38. A Hand-Book to the Peak of Devonshire, and to the Use of the Buxton Mineral Waters; or, Buxton in 1854. By W. H. Robertson, M. D., &c. With a Map of the Peak of Devonshire and the surrounding Districts; a Plan of the Buxton Park and Pleasure Grounds, Elevations and Plans of the Baths, &c.; a Botanical Appendix by Miss Hawkins, and a Directory, &c. London: Bradbury and Evans, 1854. 12mo. pp. 227.

[*Dr. Robertson has conferred an especial benefit on the visitors to Buxton in the publication of this beautiful little volume.*]

39. On the Special Treatment of Pulmonary Consumption and Hooping-Cough. By John Hastings, M. D. London: Highley, 1854. 12mo. pp. 171.

40. On the Structure and Use of the Spleen. By Henry Gray, F. R. S., Demonstrator of Anatomy, and Curator of the Pathological Museum of St. George's Hospital. London: J. W. Parker and Son, 1854. 8vo. pp. 380.

PERIODICALS WITH WHICH THE DUBLIN QUARTERLY JOURNAL IS EXCHANGED.

GREAT BRITAIN.

1. The British and Foreign Medico-Chirurgical Review and Journal of Practical Medicine. Published Quarterly. London: Churchill, and Highley. (Received No. 27.)

2. The Edinburgh Medical and Surgical Journal; exhibiting a concise View of the latest and most important Discoveries in Medicine, Surgery, and Pharmacy. Published Quarterly. Edinburgh: Black. (Not received.)

3. The Retrospect of Medicine, being a half-yearly Journal, containing a retrospective View of every Discovery and practical Improvement in the Medical Sciences. Edited by W. Braithwaite. London: Simpkin and Co. (Received Vol. XXIX.)

4. The Half-Yearly Abstract of the Medical Sciences, being a practical and analytical Digest of the principal British and Continental Medical Works, &c. Published Half-Yearly. Edited by W. H. Ranking, M. D., and C. B. Radcliffe, M. D. London: Churchill. (Received Vol. XIX.)

5. Pharmaceutical Journal and Transactions. Published Monthly. London. Edited by Jacob Bell. (Received regularly.)

6. The London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science. Conducted by Sir D. Brewster, R. Taylor, Sir R. Kane, W. Francis, and J. Tyndall. Published Monthly. London: Taylor. (Received regularly.)

7. The Chemist, a Monthly Journal of Chemical Philosophy and of Chemistry. Edited by J. and C. Watt. London: Highley. (Received regularly.)

8. Medical Times and Gazette. Published Weekly. London: John Churchill. (Received regularly.)

9. Medical Association Journal. Edited by John Rose Cormack, M. D. Published Weekly. London: Honeyman. (Received regularly.)

10. The Journal of Psychological Medicine and Mental Pathology. Edited by Forbes Winslow, M. D. Published Quarterly. London: Churchill. (Received No. 26.)

11. Quarterly Journal of Microscopical Science: including the Transactions of the Microscopical Society of London. Edited by E Lankester, M. D., F. R. S., &c., and G. Busk, F. R. C. S. E., F. R. S., &c. London: Highley. (Received regularly. No. 5 not received.)

12. The Glasgow Medical Journal. Published Quarterly. Griffin and Co. (Received regularly.)

13. The Athenæum—Journal of English and Foreign Literature, Science, &c. Published Weekly. London. (Received regularly.)

14. The Westminster Review. Published Quarterly. London: John Chapman. (Received regularly.)

INDIA.

15. The Indian Annals of Medical Science; or, Half-Yearly Journal of Practical Medicine and Surgery. Calcutta: Lepage and Co. (Received No. 2.)

AMERICA.

16. The American Journal of the Medical Sciences. Edited by Isaac Hays, M. D. Published Quarterly. Philadelphia: Blanchard and Lea. (Received regularly.)

17. The Medical Examiner and Record of Medical Science. Edited by S. L. Hollingsworth, M. D. Published Monthly. Philadelphia: Lindsay and Blakiston. (Received regularly.)

18. The New York Journal of Medicine and the Collateral Sciences. Edited by S. S. Purple, M. D., and S. Smith, M. D. Published Monthly. New York. (Received regularly.)

19. The American Journal of Science and Arts; conducted by Professors Silliman and B. Silliman, Jun., and J. D. Dana. Published Bi-monthly. New Haven. (Received regularly.)

20. The American Journal of Insanity. Published by the New York State Lunatic Asylum, Utica, Quarterly. (Received regularly.)

21. The American Journal of Dental Science. Edited by C. A. Harris, M. D., A. A. Blandy, M. D., and A. S. Piggot, M. D. Published Quarterly. Philadelphia: Lindsay and Blakiston. (Received regularly, except Vol. IV. No. 1.)

22. The Boston Medical and Surgical Journal. Published Weekly. Boston: Clapp. (Received regularly, except Part 282.)

FRANCE.

23. Gazette Médicale de Paris. Published Weekly. Paris. (Received regularly.)

24. Gazette Hebdomadaire de Médecine et de Chirurgie. Published Weekly. Paris: Victor Masson. (Received regularly.)

25. Journal de Chimie Médicale, de Pharmacie, de Toxicologie, et Revue des nouvelles, scientifiques, nationales et étrangères, &c. Published Monthly. Paris: Labé. (Received regularly.)

26. Journal de Pharmacie et de Chimie, &c. Published Monthly. Paris: Victor Masson. (Received regularly).

27. L'Union Médicale, Journal des intérêts scientifiques et pratiques, moraux et professionels du Corps médical. Published three times a Week. Paris. (Received regularly.)

28. La Lancette Française, Gazette des Hôpitaux civils et militaires. Published three times a Week. Paris. (Received regularly.)

29. Le Moniteur des Hôpitaux, Journal des Progrès de la Médecine et de la Chirurgie Pratiques. Redacteur en chef: M. H. de Castelnau. Paris. Published three times a Week. (Received regularly.)

30. Revue Médicale Française et étrangère, Journal des Progrès de la Médecine Hippocratique. Published twice a Month. Par J. B. Cayol. Paris. (Received regularly.)

31. Revue Médico-Chirurgicale de Paris. Sous la Direction de M. Malgaigne. Published Monthly. (Received regularly.)

32. Archives Générales de Médecine; Journal Complémentaire des Sciences Médicales. Published Monthly. Paris: Labé. (Received regularly.)

33. Bulletin de l'Académie Nationale de Médecine. Published Monthly. Paris: Baillière. (Received regularly.)

34. Mémoires de l'Académie de Médecine. (Received regularly.)

35. Revue de Thérapeutique Médico-Chirurgicale. Published twice a Month. Paris: Dr. A. Martin-Lauzer. (Received regularly.)

36. Journal de Médecine et de Chirurgie Pratiques a l'Usage des Médecin. Published Monthly. Par Lucas Championnière. Paris. (Received regularly.)

37. Journal des Connaissances Médicales pratiques et de Pharmacologie. Published twice a Month. Paris. (Received regularly.)

38. Annales Médico-Psychologiques. Par MM. Baillarger, Brierre de Boismont, et Cerise. Published Quarterly. Paris: Victor Masson. (Received regularly.)

39. Bulletin Général de Thérapeutique, Médicale et Chirurgicale. Recueil pratique. Publiée par le Docteur Debout. Published twice a Month. Paris. (Received regularly, except Part 7, of Vol. XLVI.)

40. Repertoire de Pharmacie. Recueil pratique. Par M. le Dr. Bouchardat. Published Monthly. (Received regularly.)

41. Archives d'Ophthalmologie, comprenant les travaux les plus importants sur l'Anatomie, la Physiologie, la Pathologie, l'Hygiène et la Thérapeutique de l'Appareil de la Vision. Par M. A. Jamain, Docteur en Médecine, &c. Published Monthly. Paris. (Received regularly.)

42. Gazette Médicale de Strasbourgh. Published Monthly. (Received regularly.)

43. Revue Thérapeutique du Midi, &c. Publié par le Dr. Louis Saurel. Published twice a Month. Montpellier. (Received regularly.)

44. Journal de Médecine de Bordeaux. Redacteur en chef, M. Costes. Published Monthly. (Received regularly.)

BELGIUM.

45. Annales D'Oculistique. Fondées par le Docteur Florent Cunier. Published Monthly. Brussels. (Received regularly.)

46. Nouvelle Encyclographie des Sciences Médicales. Publiée par une Société de Médecins. Published Monthly. (Received regularly.)

47. Annales et Bulletin de la Société de Médecine de Gand. Published Monthly. (Received regularly.)

GERMANY.

48. Zeitschrift für rationelle Medicin; herausgegeben Von Dr. J. Henle and Dr. C. Pfeufer, Professoren der Medizin an der Universität zu Heidelberg. Published Monthly. (Received Vol. IV. No. 2.)

49. Der ärztliche Hausfreund, herausgegeben von R. Froriep. Landes-Industrie-Comptoir, in Weimar. (Received regularly.)

50. Zeitschrift der Kais. Kön. Gesellschaft der Aerzte zu Wien. Redacteur: Professor, Dr. Ferdinand Hebra. (No. 12, for 1853, not received.)

51. Vierteljahrschrift für die praktische Heilkunde, herausgegeben von der medicinischen Facultät in Prag. Published Quarterly. Karl André. (Received regularly. Parts 2 and 4, 1851, and Parts 2 and 3, 1850, not received.)

52. Annalen der Chemie und Pharmacie. Herausgegeben von F. Wöhler und J. Liebig. Published Monthly. Heidelberg. (Received regularly.)

53. Canstatt's Jahresbericht über die Fortschritte der gesammten Medicin in allen Ländern, im Jahre 1852. Redigirt von Pr. Scherer, Pr. Virchow, und Dr. Eisenmann. Würzburg: Stahel. (Received regularly.)

54. Journal für Kinderkrankheiten. Herausgegeben von Dr. Fr. J. nehrend und Dr. A. Hildebrand. Published Monthly. Erlangen: Palm und Enke. (Received regularly.)

55. Archiv für pathologische Anatomie und Physiologie, &c., Herausgegeben von R. Virchow. Berlin. Published Monthly. (Received regularly.)

SWITZERLAND.

56. Verhandlungen der Naturforschenden. Gesellschaft in Zurich. Published Weekly. (Not yet received.)

HOLLAND.

57. Nederlandsch Lancet. (Received regularly.)

DENMARK.

58. Bibliothek for Læger, Tredie Række. Udgivet af Direktionen for de classenske Literaturselskab. Redigeret af Dr. Dahlerup. Published Monthly. Kjobenhavn. (Not received.)

59. Hospitalsmeddelelser. Copenhagen. (Not received.)

NORWAY.

60. Norsk Magazin, for Lægevidenskaben, udgivet af det medicinske Selskab i Christiania. Redigeret af W. Boeck. Faye. A. W. Münster. Lund. Voss. Published Monthly. Christiania: Feilberg & Landmark. (Received regularly.)

SWEDEN.

61. Hygiea, Medicinsk och Pharmaceutisk Månads-Skrift. Published Monthly. Stockholm: Fritze. (Received regularly.)

ITALY.

62. Gazzetta Medica Italiana Federativa Toscana. Florence. Published Weekly. (Received regularly.)

63. Bulletino delle Scienze Mediche. Publicato per cura della Società Medico-Chirurgica di Bologna. Published Monthly. (Received regularly.)

64. Giornale Veneto di Scienze Mediche. Published Monthly. (Received regularly.)

SPAIN.

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NOTICES TO CORRESPONDENTS.

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AUGUST 1, 1854.

PART I.

ORIGINAL COMMUNICATIONS.

ART. I.—*On Wounds of Arteries, and their Treatment.* By RICHARD G. H. BUTCHER, Member of Council and Fellow of the Royal College of Surgeons in Ireland; Examiner on Anatomy, Physiology, and Pathology thereto for five years; Surgeon to Mercer's Hospital.

AMONGST the perplexing casualties demanding surgical assistance there are none fraught with so much imminent peril to the patient as wounds of arteries; there are none, at once so critical and appalling; none that require so much skill, decision, promptitude, and coolness upon the part of the surgeon. A violent gush of blood from a wound is not only frightful to the subject, but raises a feeling of alarm in the minds of all who witness it; and I care not how dexterous and self-possessed the surgeon may be, every well-constituted mind must feel oppressed by a sense of anxious care and deep responsibility at such a moment.

The following cases where furious arterial bleeding occurred, the result of wounds, were recently under my charge in hospital; they present many points of interest; each shall be given in detail, and if I have departed from fixed rules of practice, the reasons which actuated me shall be fully assigned.

Case I.— *Wound of the Profunda Artery; Ligature of the Femoral, below the margin of Poupart's Ligament, by a* transverse *incision; Arrest of the bleeding.*

Patrick Flattery, aged twenty-two years, a shoe-maker, was admitted into Mercer's Hospital on the morning of the 26th of February, 1854, at a quarter to 2 A. M. He had been drinking with a number of companions, when a quarrel originated between him and another; in his rage he seized a knife and rushed upon his antagonist; in the act of stabbing him he was caught from behind and dragged back; during violent struggles which he made to get free, his arm swung forcibly round, and the instrument was thrust to the hilt in his right thigh. No sooner was the blow struck than blood gushed out in a florid stream, the knife fell to the ground, and in a few seconds syncope supervened. One fellow, more intelligent than the rest, tied a handkerchief tightly round the limb, including the stricken part; this being done his comrades raised him on their shoulders and quickly conveyed him to hospital; not more than a few minutes elapsed between the time of the infliction of the injury and the patient's reception into the house; while being conveyed he became sensible and bled again. He was received in the following condition at the hour specified: he was sensible and able to speak, though indistinctly; his face was blanched and covered with sweat; the action of the heart feeble, and pulse scarcely perceptible at the wrist. Pressure was at once placed upon the femoral artery at the groin; the trowsers and stocking removed, and the handkerchief girt upon the limb taken away. On relaxing the pressure over the main trunk no blood flowed from the wound, it had then ceased; the quantity lost must have been enormous, for not only were the patient's trowsers and stockings saturated, and his shoe filled with it, but also the coats of two of the men who supported him on their shoulders; in addition to all this, a good deal was shed upon the floor of the room where the violence was committed. There being no bleeding when the man was admitted to hospital, he was quickly put to bed, the edges of the wound were supported together, and a compress applied and retained by a few turns of a roller. A tourniquet was next placed loosely round the limb so as to command the femoral artery at the groin if bleeding ensued; warm milk was given, and wine cautiously administered; in some time the circulation became a shade more developed, and there was no recurrence of the bleeding; the man shortly fell asleep and remained so until morning.

9 A. M. A short time before my visit the patient woke

somewhat refreshed from sleep; his pulse, however, was very small and feeble; he complained of pain in the wound and numbness of the leg; but as the dressings were not even stained with blood I considered it prudent not to disturb them.

I anticipated another flow of blood when reaction was fairly established, and under this conviction requested Mr. Daniel, resident pupil of the hospital, to remain beside the patient's bed all day. I was strengthened in this opinion from the following circumstances: we had evidence, from the large amount of blood lost, that a vessel of considerable magnitude had been wounded, because the hemorrhage was rapid, profuse, and inductive of almost instant syncope; this fact, coupled with the locality of the wound, its position near the centre of the thigh, formed such a combination as to make me estimate the state of repose, in which the patient then lay, as being delusive and far from being the harbinger of safety.

3 P. M. The patient suddenly screamed out from the torture of cramps in the leg, and almost as instantly, the compresses and bandages over the wound were dyed in scarlet blood; the tourniquet was tightened and the bleeding arrested; I was instantly sent for, and in a few minutes reached the hospital. The bleeding was controlled by the pressure at the groin; I removed the dressings; and shall now describe the size and position of the wound. It was exactly an inch and a half in extent, its long axis being parallel with that of the limb, situated a little above the centre of the thigh, and so closely related to the inner wall of the fibrous sheath enclosing the femoral artery and vein, that absolutely a part of this wall was laid open; as the limb lay extended, the edges of the wound gaped but slightly, and a little scarlet blood filled the interval. Assisted by Mr. Tagert, senior surgeon to the hospital, I proceeded to treat the wound in the following way:—The tourniquet being steadily fixed, I passed the index finger of my left hand into the wound; it was readily admitted, but did not reach the bottom; the femoral artery and vein were in contact with it on the outside: permitting my finger to remain as a director, I conducted a knife along it, and fully dilated the wound downwards, for at least three inches; I then turned the knife, my finger remaining still in the wound, and dilated freely to the same extent upwards; thus an incision fully six inches in length lay parallel to, and not more than the eighth of an inch from the femoral artery, its centre corresponding to the original wound. Now that the comparatively superficial parts were dilated freely, I was enabled to pass the

index finger of my left hand still deeper along the trajet made by the shoemaker's knife; the bone lay in contact with it on the outside; the parts were then freed up and down as before; the tourniquet was then relaxed by a few turns, so as to point to the source of the divided artery, instantly a scarlet current rushed up from the deepest part of the wound; quickly the tourniquet was tightened, and the flow checked. On passing the index finger still deeper in the wound, it was grasped in a tendinous slit; this too was freed, yet the cut ends of the bleeding artery could not be laid hold of and secured; the depth of the wound in this large fleshy thigh was several inches, and quite sufficient to bury the fingers and part of the hand. The ligaturing of the divided vessel in the wound not being practicable, I at once decided on losing no more time, and proceeded to place a cord around the main artery of the limb, below Poupart's ligament. The femoral artery at the groin could not be secured by an incision made in the ordinary way, parallel or rather obliquely to the vessel, because from the very first accession of hemorrhage the tourniquet occupied the groin, and, therefore, presented an obstacle not to be overcome, for I did not deem it prudent or safe to relax the compressing force for an instant. By this combination of circumstances I was compelled to tie the artery by an incision made transversely below Poupart's ligament. I do not wish to lay claim to priority in this proceeding, for I am aware that Mr. Porter both conceived and executed it in a case of traumatic aneurism, resulting from wound of the femoral trunk occurring in Hunter's canal, where the tumour in its upward course closely approximated Poupart's ligament; I adopted it without hesitation, or even choice, as an operation of *necessity*, for the reasons assigned. In the enfeebled condition of the patient I dare not risk another flow of blood; and, therefore, before going into details, I may here state, of so much importance did I estimate quietude and the uninterrupted maintenance of pressure on the main vessel of the limb, that I did not hesitate to execute the extensive incision in the thigh already referred to, as well as the operation now about to be detailed, without disturbing the man from the low bed on which he lay.

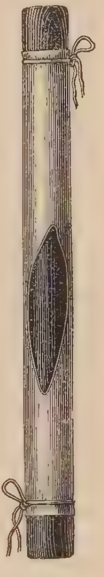
A transverse incision was carried across the artery and vein commencing at the lower margin of Poupart's ligament, about a quarter of an inch internal to the latter vessel, and prolonged outwards for two inches and a half; to effect the division of the integument and superficial fascia, the knife was lightly applied; the remaining tissues were cautiously divided, some being cut upon a director, in a few seconds the artery was exposed and also the femoral vein; the latter, when freed, instantly swelled, obscuring the parts; however, by judicious care, the ligature was conveyed round the artery from within outwards, and tightly tied; so soon as this was effected the tourniquet was removed and the bleeding staunched. I next made provision against hemorrhage from the lower end of the divided artery by plugging the wound from the bottom with long shreds of lint, and applied gentle and equable pressure by means of a bandage from the toes upwards to the groin; after this the limb was wrapped in cotton wadding, and heated jars placed in close approximation to it. During these various proceedings wine and brandy were freely swallowed, and when all was completed, warm water and brandy were thrown, by means of a long tube, far up into the intestines, with most excellent effect. In a short time the pulse at the wrist became fuller, and the jactitation and restlessness greatly subsided; half a grain of morphia was likewise administered.

6 P. M. The limb preserved its full temperature; no return of bleeding.

11 P. M. No bleeding, though circulation greatly improved; action of the heart feeble, yet distinct and steady; pulse at the wrist likewise enlarged. Since last report, brandy and strong broth had been liberally taken by the mouth, and also delivered by the long tube high up into the large intestines. Were it not for the remarkable amendment in his condition I was determined to have tried transfusion.

The patient's state seemed manifestly improved up to 2 o'clock, A. M., of the morning of the 27th. At this time he spoke calmly, but hopelessly, and died shortly after without a struggle.

The examination of the parts after death was conducted with great care in presence of a large class of students. The compresses being removed from the wound, water was injected through the femoral trunk, just below where the ligature had been applied, and it welled up from the bottom of the cut so extensively dilated in the thigh. On sponging away the fluid and making most diligent search, the profunda artery, immediately behind the upper margin of the adductor longus tendon, was discovered, holding its normal course, with a considerable aperture in its outer wall, corresponding to the direction in which the knife penetrated; on stricter investigation it was apparent that a portion of the coats of the vessel, fully three-quarters of an inch in extent, was in fact sliced out; thus an aperture was formed, the most serious which could have been inflicted,—irremediable by nature. The size of the profunda in the present instance was much larger than is usually met with; where the vessel passed at the point specified it was fully the size of a goose-quill, or, in other words, its caliber was sufficiently spacious to admit a No. 9 bougie; on this, the specimen now remains preserved in spirits, accurately showing the amount of injury inflicted, and the gaping nature of the wound; minor vessels, no doubt, were severed, but the alarming hemorrhage must be referred to the above source. The annexed wood-cut was drawn from this preparation.



The first practical point to be noticed in the foregoing case is, the absence of all operative measures for some hours, though it was confidently assumed, from the amount of blood lost, that a vessel of magnitude had been wounded. Meddling surgery was not had recourse to, because, when the patient was seen by me, the hemorrhage was stayed, and no matter however furious it may have been, the surgeon would not be warranted, in my opinion, to go in search of the wounded vessel, unless it burst forth again. I shall illustrate the force of this precept by a case from a recent author:—Mr. Erichsen states, A man was brought to the University College Hospital, with a deep stab in the groin, directly in the course of the external iliac artery. A very large quantity of arterial blood had been lost, but the hemorrhage ceased on his admission by the application of pressure, &c. From the great and sudden loss of blood it was supposed that the external iliac had been punctured; the bleeding did not return, the wound healing without any further trouble.

And now to return to the case,—a strict watch was set upon the patient, and the moment that bleeding recurred, then I did not hesitate, but fearlessly dilated the wound up and down to many inches in extent, in expectation of being able to discover the wounded artery, so as to ligature it above and below the breach in its coats. In my efforts to secure the vessel I was frustrated; it was impracticable, owing to its great depth from the surface; and, not thinking it prudent to compromise the safety of the patient by a more prolonged search, or risk further loss of blood, I proceeded to put in practice what I conceived the thing next best to be done, namely, to ligature the main artery of the limb above the origin of the profunda. I wish again to repeat, that it was with reluctance I abandoned the grand rule, distinctly laid down by John Bell, and the value of which should be impressed upon the mind of every surgeon, namely, that both ends of the wounded artery should be sought for and tied in the wound itself.

There is a practice urged by Mr. Guthrie, in cases where the wound passes indirectly to the principal artery, from the back or outside of the limb, that the surgeon need not follow the track of the wound, but may cut down upon the vessel where nearest the surface, a probe being passed by the wound to indicate the point to be arrived at.

This proceeding I consider as fraught with much risk, for in a deeply penetrating wound it is a most difficult point to determine, without dilatation, the exact source from which the hemorrhage proceeds; in some instances a ready solution may be afforded, but in others doubt and uncertainty will embarrass the surgeon.

By some it may be supposed that after I dilated the wound, and was cognisant of the fact that a large vessel had been cut at such a distance from the surface, at a point fully two-thirds of the limb's depth, I might have applied the foregoing rule and reached the artery from behind. Even assenting to the postulate, the practice was prohibited here, from the imminent danger which would be incurred by the slightest movement of the patient, for the least disturbance of the tourniquet would permit an arterial flow, with which the last lingerings of vitality might escape; indeed, this point has been stringently insisted on, where the peculiarity of the operative measures executed is given in detail.

CASE II.—*Wound of the Posterior Tibial Artery successfully treated by pressure at the site of injury, and compression of the Popliteal and Femoral Arteries; Complication, Traumatic delirium; Recovery.*

On the morning of the 6th of March, 1854, at the hour of half-past 1, A. M., Thomas Ryan, aged thirty-eight years, a police constable, was brought to Mercer's Hospital, having sustained several wounds, accompanied by severe losses of blood. The history of the case is briefly told: He was night-man over one of the cells in College-street Police Station-house. Amongst the prisoners charged there was one man most violent, who, under pretence of requiring a drink of water, induced the constable to enter the cell; no sooner was the door opened than the prisoner rushed upon him and inflicted, with a knife, two severe wounds upon the face, one of which split the lower lip near its right commissure, and the second laid bare the maxillary bone, from above downwards, for about two inches beneath the left eye. After this a struggle ensued, when the man was overcome and thrown down; while on the ground he made several attempts to stab the policeman in the legs, and, ultimately succeeding, he thrust the knife up to the haft in the calf of the left leg, rapidly inflicting two wounds, one over the fibular artery, about the centre of its course, and the second at the junction of the upper and middle thirds of the leg, about an inch and a quarter external to the inner edge of the tibia; from the former bleeding was smart, but from the latter the blood gushed out in a red current. The wounded man was quickly brought to hospital; he had lost a very large amount of blood in the station-house; on being stripped his boot was full and his trowsers saturated with it; while the resident pupil was having his clothes removed in the surgery, the bleeding broke out afresh, and though only permitted for a few seconds, absolutely a pool of blood formed. The hemorrhage was stayed by pressure exerted upon the femoral artery at the groin, and in less than ten minutes I saw him; during this interval not a drop of blood was lost, so carefully was the vessel commanded by my intelligent dresser, Mr. Daniel. From an inspection of the wound, its position, the enormous amount of blood lost, the shape and length of the instrument by which it was inflicted, I had no doubt whatever that the posterior tibial artery was the vessel wounded, and the source of the fearful hemorrhage; the wound was but a small one, not more than three-quarters of an inch in extent, and parallel with the long axis of the limb.

Manifestations of the amount of blood lost were strikingly characteristic of the rapid flow; he had fainted before I saw him, and now his face was blanched, his lips blackish, with dark circles round the orbits; he was cold, and incessantly tossing about from side to side; he had convulsive sighing, and seemed to be struggling hard for want of air. At this time the pressure at the groin was relaxed, and there was no bleeding, so, after administering some brandy and water, I proceeded to apply pressure in the following way:—the femoral artery being commanded at the groin, a bandage was evenly rolled round the foot and ankle with moderate yet steady pressure; graduated compresses were then applied over the wounds in the calf. Each compress consisted of several pieces, the first of which lay directly on the wound and not beyond its limits; the second piece was placed over this, larger in every respect; and so on until eight or nine pledgets were superimposed, one wider and thicker than the other, thus a hemostatic was formed, fully an inch above the surface. Each compress was then steadied by the application of a few straps of adhesive plaster; when thus effectually protected from the slightest motion or disturbance, the bandage was continued up the limb and made to bear equally upon their broad basis so as to insure their effect. A rolled bandage was next made use of, and placed as a pad over the popliteal artery, in the upper part of the popliteal region, with the object of compressing the sides of the vessel and limiting the amount of blood circulating through it; the required degree of force was perpetuated by the turns of a circular roller continued upwards to the groin.

During this manipulation the limb was kept almost perfectly extended, and then laid on an inclined plane resting upon its posterior surface; an additional pad placed beneath the ham now rendered perfect the support afforded to this region. As the patient lay upon his back the body was horizontal, and the head only slightly raised, while the foot was elevated at least two feet; a side splint was next fastened on the outside of the plane so as to prevent the limb slipping in this direction; a few turns of a bandage around all secured the permanence of the position. Scarcely had an hour elapsed when the pulse at the wrist was fairly developed, and the action of the heart steady. At this time I administered half a grain of morphia.

Strict directions were given to have the patient closely watched, and on the slightest appearance of bleeding to have me apprized of it.

9 A. M. He had some sleep; the limb remained free from any amount of pain; pulse developed, therefore prohibited food. Barley water, cold, flavoured with lemon-juice and sugar, to be given as drink to the patient. Half a grain of morphia to be taken immediately.

10 P. M. Suffering very little uneasiness; has slept at intervals through the day; pulse not indicating the necessity for food; the foot has recovered its natural temperature, and is kept closely covered with cotton wadding; ordered half a grain of morphia at once: to be closely watched through the night.

March 7th, 9 A. M. The patient slept comparatively well through the night; pulse good. He did not suffer any pain in the wounds, but complained of the tightness of the pad in the ham. Before relaxing the pressure in this situation I placed an aneurism compressor in the groin, and commanded the femoral artery there. I then with a pair of scissors clipped across the turns of the bandage that maintained the pad so tightly, and likewise divided them in front of the patella, without any other disturbance to the limb: by this procedure, then, the pressure upon the main artery was changed from the popliteal vessel to the femoral at the groin; no food permitted; drinks all cool; half a grain of morphia given.

10 P. M. Complains of slight numbness and fulness of the limb, but refers no pain to the wounds; the toes are a little swollen, but preserve their full temperature; morphia repeated; cold drinks continued; to be closely watched.

March 8th, 9 A. M. Has slept uninterruptedly through the night, a repose clearly to be attributed to the sedative treatment; pupils contracted, evidently witnessing to the effects of the opium; pulse steady and full; refers no pain whatever to the limb. I did not disturb the bandages, but assiduously continued the pressure at the groin, permitting only a small amount of blood to pass through the main vessel of the limb. I considered it advisable now to lessen the quantity of morphia to a quarter of a grain, morning and evening, and now, for the first time ordered food, some tea and toast, and, in a few hours after, a cupful of beef tea, nearly cold, with bread broken in it.

9th P. M. Was summoned to see the patient. I found him exceedingly excited, restless, and raving, and with all the evidences of traumatic delirium. He was flushed and hot, with exalted pulse and hurried circulation. I instantly administered half a grain of morphia, twenty-five minims of tincture of digitalis, and twenty of sweet spirits of nitre, in a little camphor mixture. Cold was applied to his forehead; in a short time he became composed, and soon fell asleep.

March 9th, 9 A.M. Slept at short intervals through the night; not so violent or garrulous as on the last evening. His countenance is quite expressive of his wandering intellect ; his pulse, however, is soft, yet feeble, and his skin is cool. He complains of no pain in the limb; dressings undisturbed, and the compressor at the groin effectually performs its part; ordered bread and tea for breakfast, and in half an hour after gave him half a glass of punch, containing an ounce of spirits, with half a grain of morphia; ordered a pint of beef tea at two o'clock.

9 P. M. Ordered to repeat his bread and tea, punch, and morphia.

March 10th, 9 A. M. Had sleep, but was frequently disturbed by visions; at times he wanders, yet by steadily arresting his attention he speaks collectedly, and answers all questions sensibly; pulse improved in character, there being a little more volume in it; the limb remains, as from the first, in the elevated posture, with its dressings undisturbed; the compressor is likewise kept applied over the femoral artery; ordered bread and toast for breakfast; at 11 A. M. a tumbler of punch, containing two ounces of spirits, and a half a grain of morphia in it; at one o'clock chop and beef tea; and at 4 P. M. two ounces of spirits; half a grain of morphia at night.

March 11th, 9 A. M. The patient was restless during the night, and his stomach became exceedingly irritable, even to frequent emesis; however, this morning he is more rational; he attempted to take some breakfast, but instantly rejected it; ordered a draught containing two drops of creasote, in a little mint water, which rested upon the stomach, and in an hour after he was able to take some punch and dry toast; to have a chop, and four ounces of spirits, made into punch, to be taken in divided quantities through the day. Ordered half a grain of morphia at night.

March 12th, 9 A. M. Slept well, and is free from pain; delirium diminished. Having steadied the compression firmly over the femoral artery, I removed the bandages now for the first time, and on taking away the compresses suppuration was fully established in both wounds; that upon the tibial artery presented a slight blush of inflammation around it, but no pain on pressure; about a teaspoonful of healthy matter was gently pressed out. The smaller wound over the fibular artery likewise healthily suppurated. Simple dressing was applied over each, and the limb rolled from the toes up to the groin; this being effected, the compression was relaxed so as to permit only a feeble current through the main artery. The limb was placed, as before, upon the inclined plane, and steadied there by a few turns of a bandage. Ordered chops, and spirits, four ounces, in divided quantities; half a grain of morphia at night.

March 13th, 9 A. M. Going on most favourably; constitutional disturbance entirely subsiding; limb free from pain; diet as on the previous day; half a grain of morphia at night.

March 14th, 9 A. M. The patient slept all night without either unpleasant visions or restlessness, and is this morning almost quite rational; the pulse is full and soft, and 86 in the minute; dressed the wounds as on the 12th instant, adopting the same precaution as noticed then, of screwing down the compressor on the femoral artery during the several manipulations. On this day the blush of redness had considerably diminished, and the quantity of pus was not increased or altered in character; stopped the opium.

March 15th, 9 A. M. Slept the entire night without an opiate; his senses are now perfectly restored, and his countenance fully attests the fact by its altered expression; the eye has lost that inquisitive anxiety so conspicuous all through. I removed the inclined plane, and placed the limb in the semiflexed position, with the patient lying upon his side. This change of posture afforded him great comfort; I, however, continued moderate compression upon the femoral artery at the groin. Diet, &c., as before.

March 16th, 9 A. M. All constitutional derangement has now been entirely removed, and his wounds are going on most favourably; the smaller one is nearly healed, but that upon the tibial artery is still deep, open, and discharging upon gentle pressure about a drachm of purulent matter; there is no tension around it, or tendency to burrowing of its secretion; placed simple dressing over the wounds, and rolled the limb; continued the pressure on the femoral artery. Diet, &c., as before.

March 27th. Up to this date the pressure upon the femoral artery has been kept up. I was actuated in continuing the instrument from the extreme tardiness which the wound exhibited towards cicatrization.

April 8th. At length new skin is being formed around the margins of the wound. Before now but little healthy action could be generated in the granulations, though rising evenly to the level of the surrounding parts. The granulations from the first presented a bluish glassy tint and softened structure, obnoxious to reparation. By the most careful dressing and variety of applications at length they were compelled to assume a healthy character, and on the above date the wound presented all the characters of rapid repair.

April 9th. Patient permitted to get up, and move into the garden, with the object of mending his shattered health; the limb being evenly supported by a bandage.

April 15th. On this day the patient was dismissed from hospital, the wound being perfectly healed. The motions of the limb were performed without pain, and nearly perfect.

The good effects likely to accrue from the surgeon adhering to the precept of not seeking by operation for the wounded artery unless bleeding is absolutely going on when he sees the case, and upon which I have laid so much stress already, is practically illustrated in the present instance, for pressure brought to bear according to the method described fulfilled all the indications requisite to cure. To the perfection of this mode of treatment, it is essential that the compress upon the wound, and the circular roller from the toes up, be moderately tight, and smoothly and efficiently adjusted. I lay great stress upon the advantages to be derived from the solid compress over the popliteal artery above the line of the articulation. Above the angle of flexure, pressure can be brought to act with perfect precision, and employed thus, it may be relied upon as an efficient accessory, while, if attempted below the point specified, it cannot prove effectual, owing to the resistance offered by the tendinous bands strained accross the popliteal space, to overcome the tension of which a force would be required perfectly unendurable. Again, as expressed in the mode pursued, the leg must be in the least degree flexed, and this will permit the compress to lie closely upon the vessel. In conjunction with pressure of the limb in the way directed, I wish particularly to insist on the maintenance of compression upon the femoral artery as in modern days applied to the treatment of external aneurism. In the case of Ryan it was assiduously employed for three weeks, and here I conceive a practical precept of the greatest value is inculcated,—by controlling for a lengthened period the current of blood circulating in the main artery, and leading to the wounded vessel, time is afforded for the permanent sealing of its divided coats, the lymph effusion becomes sufficiently organized and firm to resist distention, and the formation of aneurism as a secondary consequence. The advantages arising from keeping the limb elevated above the position of the heart are so obvious as not to require any further comment. The manner in which the alarming constitutional disturbance was allayed has been fully enunciated in the daily report.

In support of the precept "of not searching by operation for the wounded artery, unless bleeding, when the surgeon sees the case," I might adduce many instances, but the following is very apposite, and will be sufficient for my purpose.

Case III.— *Wound of the Ulnar Artery above the Wrist successfully treated by Compression at the Wound and Pressure over the Brachial Artery.*

James Nichols, aged 43, a shoe-maker, admitted into Mercer's Hospital, under my care, March 22, 1854. He was sitting at work, and, angry with his son, who was cutting a piece of stick close beside him; he made a blow backwards with the intention of knocking the knife out of his hand, but the sharp point entered just above the wrist, inflicting a transverse wound in front, about an inch in extent, severing two of the flexor tendons and the ulnar artery. The bleeding was instant and violent, and, as the patient expressed himself, "gushed out and struck the window, which was about three feet from where he sat." The man almost instantly fainted, a handkerchief was bound tight over the wound, and he was brought to hospital; I was in the house when he arrived. On removing the handkerchief, which was soaked with blood, the violent bleeding had ceased, but a small superficial artery yielded blood, this I instantly ligatured. From the position of the wound, its depth, the large quantity of blood lost, for the patient's clothes were soaked with it, there could be no second opinion as to the ulnar artery being divided; besides, the man's own description of the bleeding was quite conclusive; it would be quite ridiculous to suppose that the small artery which I tied was the source of the excessive hemorrhage. I applied a warm sponge to the wound, for some time; however, the vessel not showing a disposition to bleed, I proceeded to treat the case by pressure in the wound, and compression over the brachial artery. Each finger was rolled separately, and all the little bandages brought to meet in the palm; these were steadily retained by a roller round the hand, which from this point was carried upwards, maintaining, with moderate firmness, compresses in the wound; during these manipulations compression was kept upon the brachial artery, just below the axilla. A compress was next laid over the brachial artery, at the junction of the lower and middle thirds of the forearm, and firmly retained by the roller being continued from below upwards. The limb was next supported on a well-padded splint, laid along its anterior aspect, and retained by bandage. The man was then put to bed, and the limb considerably elevated on an inclined plane of pillows. A full opiate was next administered.

23rd. No bleeding; half a grain of morphia to be taken every fourth hour.

24th. The patient complained of pain in the wound, so I gradually removed the splint, to be satisfied that there was no internal bleeding going on. There was no discoloration of the dressings by blood, and a total absence of all tension of the limb. Adjusted the splint as before. To continue the morphia.

27th. Removed the outer bandages, but suffered the graduated compress in the wound to remain undisturbed; slight suppuration around it.

31st. Compress cast off by suppuration; no bleeding; wound dressed simply, and the limb steadied upon pillows.

April 1st. Ligature separated, and wound granulating healthily.

April 6th. This day the patient was dismissed from hospital, the wound being all but healed; ordered to attend as an external applicant.

In connexion with wounds of the palmar arch, and of the arteries in the vicinity of the wrist joint, there are many points to be taken into account, which require separate consideration on the part of the surgeon. In reference to this special class of injuries, I have written a paper in the Dublin Medical Press[a].

From the foregoing observations it will be conceded, how strenuously I have advocated the propriety of "not searching by operation for the wounded artery, unless bleeding is absolutely going on;" and I believe the successful issue of the cases related proclaims loudly for the adoption of the practice. I would, however, lay down the following as an exception to the rule:—

WOUNDS OF ARTERIES SITUATED IN THE NECK.

When hemorrhage takes place from arteries divided in the neck, it is always rapid, profuse, and generally continuous to syncope, and often unto death; should the carotids escape, the fact still maintains, owing to the close proximity of the wounded vessel to the parent trunk, such a condition precludes the attempt at a natural hemostatic being formed; no coagulum can block the artery, no exuded fibrine can remain for a moment, the column of blood forced from the heart washes away every obstacle in its course, and it is only when the propelling power is enfeebled, diminished, almost lost, that the bleeding even for a few moments is stayed; at this period the surgeon arrives, and how is he to act? Upon his decision now will very often rest the issue of life or death. At once search should be made for the wounded artery, not for a moment should the patient be lost sight of; every requisition must be had recourse to; the internal administration of stimulants, the repeated applications of warm sponges to the wound, until, by a fresh flow of blood, the source of its origin becomes obvious. Should either of the main trunks be wounded, the artery should be ligatured above and below the wound; if a large collateral branch be cut, the same rule should be followed, *if practicable.* I have marked the words "if practicable" in italics, because sometimes the best efforts of the surgeon will be frustrated in endeavouring to secure the vessel at the wounded part; in such a dilemma he should at once proceed to tie the common carotid, and the records of surgery, if dispassionately viewed, irrespective of theory, will warrant him in the propriety of the practice, and cheer him with the most sanguine expectations of success.

The following case of suicidal wound of the throat was recently under my care in hospital; the practice pursued was in conformity with the foregoing rules, and eminently successful.

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[a] See Numbers for July 14th and 28th, 1852.

Case IV.—*Extensive Suicidal Wound of the Throat; Ligature of the right and left Thyroid Arteries; Recovery.*

A young man, aged twenty-five years, was admitted into hospital October 4, 1853, at 5 p. m. With the intention of committing suicide, he cut his throat deeply in the upper part, with a razor. The wound extended across the neck from the edge of one mastoid muscle to the other, the anterior fibres of each were cut: and the larynx was freely laid open, the lower part of the thyroid cartilage being sliced obliquely downwards; it was difficult to reconcile the extensive injury inflicted on the windpipe with the escape of the carotid vessels; the hemorrhage was rapid, and quickly produced syncope; this saved the patient. I was summoned quickly to see him. On my arrival all bleeding had ceased; the man was almost pulseless, cold and clammy. At each feeble expiration some bubbles of air were forced through the wound, tinged with scarlet blood; the edges of the wound were gaping wide apart. The act of swallowing was so imperfectly performed that I at once introduced a long tube into the stomach, and injected a considerable amount of stimulants; at the same time heated jars were applied to the surface, and sponges wrung out of hot water to the wound. This treatment was persevered in for about a quarter of an hour, when the heart began to beat more strongly, and the pulse to become more developed at the wrist. Another quarter of an hour had elapsed, and not until then did the divided vessels in the wound show any disposition to bleed. The chief arteries cut were the superior thyroids, one on either side. The upper extremity of the cut artery, on the left side, was easily secured, but its lower extremity retracted, yet in a few moments it too was tied. The artery on the right side, which had been restrained from bleeding by the pressure of the finger of an assistant, was now sought for, it had retracted, yet yielded blood very copiously. I dilated upwards in its course and succeeded in putting a ligature upon it; the lower extremity was next tied. After having secured all the vessels, and freely administered stimulants, the circulation became more developed and steady. The patient was placed upon his back with the head slighty raised, but not elevated so as to allow the edges of the wound to come even nearly in contact with each other; the head was steadied in this position by a bandage passed around it, and pinned to the pillow on either side Through the artificial aperture respiration was carried on, and to guard against irritation from the cold atmosphere coming directly in contact with the mucous membrane, the temperature of the room was raised many degrees. On the third day there was no recurrence of the bleeding, and suppuration was established in the wound; an attendant constantly sat beside the bed, to soak up, with a piece of sponge, any excess of purulent matter, so as to guard against its trickling into the air tube. It is unnecessary here to enter into all the varied treatment which was requisite to conduct this very serious case to a fortunate termination. For our present purpose it is sufficient to state, that the ligatures were cast off on the thirteenth, fifteenth, and seventeenth days, without any accession of hemorrhage; and on the 8th of November the patient was dismissed cured, no fistulous orifice remaining to mark the position where the cartilage of the larynx had been laid open. In the foregoing case we have a good example of the salutary effects of tying the cut arteries in the wound, and dilating freely the parts where requisite, in order to secure them. This instance affords an example where another accession of bleeding would most probably have terminated life; therefore, the necessity for the decided measures at once put into execution, because here, from the locality of the injured vessels, no pressure could be efficiently made in the wound, and from the same reasoning it follows, that no mechanical contrivance could be placed over the carotids, so as by compression to limit the impetus and quantity of blood transmitted to the site of injury.

In conclusion, I shall once more advert to the great power which the latter auxiliary (compression of the main artery leading to the wounded vessel) possesses, in contributing towards the formation of a natural hemostatic. The case has been already noticed in the records of the Surgical Society of Ireland.

Case V.—*Extensively comminuted Fracture of both Bones of the Forearm, with excessive Hemorrhage into the Limb from Laceration of the Posterior Interosseal Artery; Recovery.*

James Scarlet, a groom, aged 42, was admitted into Mercer's Hospital under my care, in the month of June of the past year. He had been brushing down a vicious horse, and was in the act of leaving the box-stall in which he was kept, when the animal kicked at him, and struck, with great force, his right fore-arm. The full impetus was received, as the limb, when stricken, was prevented from receding by the pillar of the stall. He was brought to hospital immediately after the accident, not more than ten minutes having elapsed, and I saw him at once.

The clothes being removed, on simple inspection of the right forearm, there were two conditions that conspired to produce very great deformity, viz., remarkable shortening, with a projecting angle backwards; and considerably increased or augmented bulk, as contrasted with the sound limb. On closer examination, the amount of shortening somewhat exceeded two inches, while the circumference was increased by two and a half. On making extension at the wrist, the arm being fixed by an assistant, and the forearm held at right angles with the arm, the ulna and radius were, with little hindrance, discovered to be broken; the former smashed in pieces for three inches in extent, commencing a little more than three inches from the extremity of the olecranon process, and extending downwards; while the radius was likewise comminuted for two inches in extent in the same situation. The integument over the part, posteriorly, was only scraped, being merely marked by the curve of the horse's shoe,—an immunity from laceration ascribable to the man having on at the time a thick fustian jacket. On drawing down the hand, bringing somewhat into position the broken fragments, and restoring the forearm to its natural length, as indicated by the measurement, still, the fulness posteriorly, and the increased bulk of the limb, by its circumferential measurement, corresponding to the site of fracture, was not very materially lessened, being only diminished three-quarters of an inch, so that there remained still a fulness of the limb, amounting to an inch and three-quarters to be accounted for in the diagnosis. Now the swelling, so marked and prominent behind, could only be attributed to the giving way of some artery,—an artery deep-seated and of considerable size; such an inference was arrived at, first, from the rapidity of its production, the absence of discoloration of the surface, the distinct fluctuation perceptible to the touch, and that deep in the limb; there was not time for inflammation to be set up, matured, and its products eliminated; therefore, the fluid thrown out must have been blood. From the proximity of the posterior interosseal artery to the broken parts, I believed this to have been the vessel torn, and also for the following reasons: the radial artery at the wrist afforded its full impulse, while an almost imperceptible thrill only could be detected in the ulnar vessel; yet, after a month from the date of the occurrence of the accident, its full beat was restored. The indications of treatment aimed at were, to keep up extension at the hand, and thereby maintain the broken pieces as nearly in their natural relationship to each other as possible; to diminish the column of blood circulating in the humeral artery, and thus, by an enfeebled stream, lessen, or altogether arrest further extravasation.

To realize so desirable a consummation it was essential the mechanical contrivance employed should interfere as little as possible with the superficial circulation of the limb, and leave the part exposed for the application of cold,—an auxiliary, to be presumed, so efficacious and powerful here. The mode by which these several indications were carried out was as follows:—The forearm, placed at a right angle with the arm, and midway between pronation and supination, had extension made upon it by an assistant grasping the fingers in one hand, while, with the other, he forced back the lower extremity of the humerus,—thus its normal length was restored. Placed then along the anterior surface of the limb was a splint, formed in the following manner: it was considerably hollowed out at its upper end for the full reception of the inferior part of the humerus, just above the condyles, whilst its lower end extended as far as the extremities of the fingers. The cornua of the curve were unequal, the internal being prolonged far more backwards than the external, the obvious advantage of which will appear presently. The width of the splint also exceeded by two inches that of the forearm, it being likewise narrowed a little opposite the wrist. Again the padding of the splint requires notice. Over its entire extent, layers of soft wadding were placed, and augmented in a particular manner along the margin of the curve: while over the inner cornu of the splint wadding was rolled, so as to form a special compress to bear upon the brachial artery. The splint, thus modified, was secured in the following way: the hand being lashed to its lower end, both were drawn down to the full extent of the forearm, the upper end, having received into its curve the lower part of the shaft of the humerus, was effectively steadied by a few turns of a bandage, embracing both it and the olecranon process of the ulna. The extreme breadth of the splint will account for there being no pressure occasioned by the bandage laterally. Not only was the pressure on the olecranon effectual in steadying the splint, but it likewise tended to tilt out from the interosseous space the upper large fragment of the ulna. With the splint applied in this way, the pad upon its inner cornu lay obliquely across the brachial artery and compressed it, allowing only a small stream to pass. This effect was quite manifest by the altered and now feeble beat in the radial artery, and the total absence of impulse in the ulnar vessel. The patient lay in bed, with the limb in the same position, semiflexed, and supported on an inclined plane of pillows raised considerably above the trunk. The splint was so wide, that in fact the ulnar edge of it rested on the pillows and bore the arm up from pressure, an advantage so obvious as not to require comment. Again, this posture was most desirable, for by the weight of the arm resting upon the compress over the inner cornu of the splint, the approximation of the walls of the brachial vessel was insured. The limb, as it lay on the pillows, was kept from rolling by a wide bandage pinned to the mattress on either side; thus, then, the posterior surface of the forearm, including the entire site of injury, remained exposed, free from bandaging, and in the most favourable posture for the application of cold.

3 P. M. There had been no undue pressure from the mechanical means employed; there was, however, some increase of extravasation, owing to the patient's restlessness having displaced the pad over the brachial artery; it was readjusted, and at the same time an additional one applied, which had the desired effect of again diminishing the current passing through the vessel.

19th. The patient complained of a slight degree of tension diffused equally through the broken part; the brachial artery continued well controlled, and the temperature of the limb was almost natural, perhaps a few degrees higher, for the skin all over the body was hot, and the circulation hurried. Administered digitalis in combination with nitre, so as to lower the action of the heart, and ordered the cold application to be continued assiduously to the part.

3 P. M. No increase of tension, and the digitalis had acted satisfactorily. At this time, had there been the slightest evidence of a further extravasation into the limb, I would have acted as I have done in other instances with the best results, viz., abstract blood to a large amount from the system. Ordered a brisk cathartic of infusion of senna, the compound tincture, and extract of scammony; with strict injunctions that the bed-pan should be passed beneath the patient when the medicine operated, and so prohibit all disturbance of the fractured bone.

June 21st. Owing to the extreme distention and increase of temperature of the limb, vesicles had arisen upon it, their character being tense, elastic, and limited in extent, or, in other words, incapable of being emptied into the surrounding cellular tissue, and containing a bloody serum. Each was punctured, the contents gently pressed out, and the scarf skin carefully preserved as a covering, over which a layer of soft lint was laid. The further escape of blood into the tissues of the limb had been checked, and that already extravasated was becoming more firm. Readjusted the splint; during the time of its removal extension was steadily kept up, and undeviating pressure on the brachial artery by the hand of an assistant.

23rd. On this morning there was evidence of the elbow joint being implicated through the injury in its immediate locality. The patient had his sleep disturbed by constant and burning pain in it, lasting almost the entire night. Pressure over the joint, particularly along its lateral walls, occasioned great suffering, and the integuments were swollen and of a bright red colour, extending to a considerable distance up the arm. The patient did not complain of uneasiness in the site of the fracture, or its immediate vicinity. Ordered eight leeches to be applied immediately above the joint, and in four hours after, half that number, so as to have a continuous weeping kept up for some hours from the inflamed parts; this end to be still further promoted by the constant application of warm stupes. The cathartic draught, such as the patient had on the 19th, was repeated.

On the 24th relays of leeches were again applied, which were followed by a total subsidence of inflammatory action about the joint.

28th. Readjusted the splint; the effused blood, occasioning the tumour posteriorly, was considerably diminished in size, and far more solid. Placed the forearm in a sling, and permitted the patient to sit up in bed. On the 30th allowed the patient to get up and move about the ward; and on the 16th of July he was dismissed from hospital, to attend as an external patient.

It remains only to add, that on the 6th of August the man was in possession of all the motions of the limb, and able again to go into service and resume his occupation.

I cannot conclude this paper without adverting to a mode of treatment for arresting arterial hemorrhage, first advocated and put in practice by Malgaigne, in 1834. I allude to powerfully bending the injured limb. In many instances I have availed myself of this proposal, and have found it a valuable accessary. It is, I conceive, particularly valuable in conjunction with gentle pressure on the main vessel of the limb, in cases where from a sloughing surface blood issues, and where no immediate compression can be employed. In such a state there are other special directions I would offer, and which from experience I can avow will not disappoint the practitioner. I have just dismissed a patient from hospital, the history of whose case will fully illustrate what I wish to convey.

Case VI.—*Excision of the Index Finger, together with the Metacarpal Bone, performed under the influence of Chloroform; Profuse Hemorrhage on reaction being established; Arrest of the Bleeding by powerful flexure of the injured Limb, together with gentle pressure over the Radial and Ulnar Arteries; Recovery.*

James Porter, aged 51, an ostler, admitted into Mercer's Hospital, April 1st, 1854. Fourteen days before this date he bruised the nail of the index finger of his right hand; shortly after, a severe burning pain settled in the part, and rapidly inflammation seized upon the entire finger. In a few days it became black and shrivelled; thus it remained for fifty-six hours, when again inflammation seized upon the living parts close to the dead, and spread rapidly up the dorsum of the hand, even to the back of the forearm. At this period the patient came under my care. For several nights and days he had no sleep; his countenance was haggard and sunken, his appetite was gone, the tongue dry and red; he had constant chills and slight rigors creeping over him; insatiable thirst, clammy skin, and irregular, feeble, small pulse; a tottering gait, with tendency to fainting. Symptoms such as these characterized the type of the constitutional disturbance; while the following were the concomitant local changes.

The unguinal phalanx, together with the second and two anterior thirds of the first, were dead, black, and shrivelled; the dorsum of the hand was swollen, tense, and highly inflamed, the integument being of a dark-red colour, with a lighter blush on the wrist and inferior third of the forearm; it likewise pitted deeply on pressure, the areolar tissue being extensively infiltrated with purulent secretion; inflamed lymphatics coursed the entire limb to the axilla, and in this region the glands were swollen, and acutely painful on the slightest touch. After thus far investigating the case I had the man placed in bed, warm punch and stimulants given, together with a large opiate, and in four hours after, his pulse got up and increased in volume, so that at this time I considered it safe to make the necessary incisions to check the violent diffuse inflammation, which was rapidly progressing and threatened the destruction of the entire limb. The tense parts being freely liberated, purulent matter, serum, and blood, were discharged in quantity. The limb was plunged into warm water to relieve pain and more effectually empty the engorged capillaries; after this the entire part was enveloped in a poultice. On the morning following there was a remarkable improvement both in the constitutional and local symptoms. The patient had some sleep, his pulse was better, and his tongue slightly moist. The hand was not so swollen. The inflammation was checked in its transit upwards, and the bubo in the arm-pit was not so sensitive to the touch. Ordered stimulants and sedatives in large quantity, viz., spirits, six ounces; decoction of bark, with ammonia in effervescence; powdered opium, half a grain every third hour. For diet, chop with strong beef tea, *ad libitum*. The hand was dressed with lint soaked in chloride of soda wash, an elevated position being preserved. On the third day quantities of detached sloughy cellular membrane were removed.

The above treatment was persevered in with manifest improvement until April 9, when inflammation of a diffuse character again seized upon the limb, taking now its anterior surface, and involving extensively the palm of the hand; on the day previous to this the man suddenly became prostrated and seized with rigors, severe pain attacked the part, and so rapid was the progress from bad to worse, that on the following morning the power of saving the limb was very dubious. Extensive incisions were again had recourse to; the palmar aponeurosis divided, the fascia covering the muscles of the thumb liberated, and the fascia of the forearm, above the annular ligament, freely slit up. Stimulants and full opiates were more liberally administered, the powdered opium being given every third hour in grain doses. On the following morning the salutary effects of the treatment were obvious: the spreading inflammation was checked, the tense parts were relaxed and flaccid. Shortly after this, suppuration was established, and the case progressed most favourably. It is unnecessary to follow up the daily report; the opium was continued in the same full quantities, and stimulants and animal food most liberally allowed up to the 17th. At this period all active inflammation had subsided, but the results of its violence afforded obstacles to union and to cure, for the soft parts around the metacarpal bone were in a sloughy state, and the bone itself, for the most part, stripped of its periosteum; during this calm I seized the opportunity of excising the diseased parts, soft and osseous altogether, thus ridding the patient at once, in his enfeebled state, from a source of undermining irritation. To lessen the shock, the operation was performed under the influence of chloroform; a few seconds were sufficient for its execution. One artery, the radialis indicis, afforded blood at the time. A few warm sponges were applied to the wound, but no vessels spouted; consciousness returned, and the patient was removed to bed, the hand elevated on a pillow, and the wound exposed to glaze. In three hours after, when the effects of the chloroform entirely passed off, and when the force of the circulation was fully restored, very rapid bleeding set in from numerous vessels. I ligatured four, but this did not suffice; the blood continued to flow very abundantly from many points. I then placed compresses over the radial and ulnar arteries, above the wrist, and made gentle pressure by means of a roller upon them; this was not sufficient, so, remembering Malgaigne's statement, I next forcibly flexed the forearm upon the arm and tied it so, at the same time keeping the limb considerably elevated. This perfectly commanded the hemorrhage, of which there was no return. For three days the part was allowed to remain in this posture, and on the fourth the constrained position was given up, as not being any longer necessary. From this date the case proceeded most favourably; the ligatures were cast off between the ninth and sixteenth days; the entire surface quickly assumed a healthy, granulating aspect, and a rapid recovery followed. During the whole treatment sedatives and stimulants were as assiduously administered as at first. The patient left the hospital with the motions of the hand perfectly preserved, and it required very close observation to become cognizant of all that had been removed.

In the ligaturing of arteries, when the surrounding parts are diseased, I wish to lay great stress upon the propriety of not using much force; the above case is a good example of the precept. I argue thus,—the arterial structure resists disintegration of its tissue for a longer period than any other in the body, and though all in its vicinity may be broken up and spoiled, it will live in the wreck around. Hence, then, I contend for the practice in these cases of not drawing the cord too tight; if this rule be followed before the time comes for the casting off of the ligature, a healthy action may be brought about by appropriate constitutional and local treatment, finally effective in the permanent sealing up of each vessel, and thus rescuing the patient from all the horrors and dangers of repeated hemorrhages.

Art. II.—*Observations on the Antimonial Powder of the last Dublin Pharmacopœia* (1850), *and on the Medical Effects of the Teroxide of Antimony.* By Jonathan Osborne, M. D., King's Professor of Materia Medica, Physician to Mercer's Hospital, &c.[a]

It is well known that the antimonial powder of the Pharmacopœias was first adopted as an imitation of Dr. James' fever powder, but the opinion has for a long time been gaining ground among practitioners, that it is nearly, if not altogether, inert. I have given it in various doses, large and small, and long ago made a series of trials expressly on this subject, but could never perceive any sensible effect except when combined with calomel. A powder of two grains of calomel and four of antimonial powder, taken at night, was not unfrequently followed by perspiration, but when given alone it never appeared to me to have any effect, and I am thus fully enabled to confirm the statements as to its inefficiency, made by Mr. Hawkins, Dr. Duncan, and Dr. Elliotson.

That it should be thus inactive may be explained from the fact, that the antimony is almost entirely in the form of antimonious acid, and that the proportion of teroxide of antimony it contains is insignificant, never amounting to 4 per cent., according to Dr. Maclagan, and totally absent in some samples, according to the experiments of Mr. Phillips.

In the Philosophical Transactions for 1801, Mr. Chenevix described a mode of preparing antimonial powder in the humid way, in which teroxide of antimony was precipitated from the hydrochlorate by ammonia. It was strange that although this process was referred to in terms of high commendation by almost all the succeeding writers on pharmacy, and was admitted to possess the great advantage of uniformity of oxidation, of which the process by heat was unsusceptible, yet that it never was admitted into any of the pharmacopœias. It was not till the publication of the last edition of the Dublin Pharmacopœia in 1850, that a mode of preparing the powder by precipitation appeared, and in this a great improvement was introduced by using tartar emetic instead of the solution in hydrochloric acid which Mr. Chenevix had employed. This preparation, however, though bearing the name of antimonial powder, is yet different from it in one respect, and that the most important, in all the antimony it contains being exclusively in the state of teroxide. It has therefore appeared to me desirable to ascertain its medical effects by actual experiment. The only account of the effect of the powder, as prepared by Mr. Chenevix, that I can find, is contained in the following words, with which his paper concludes:—"I gave some of my powder to Dr. Crichton, Dr. Babington, and Mr. Abernethy, gentlemen whose extensive practice and acknowledged skill sufficiently enabled them to judge of its medical properties. They all concur in opinion, that in its general effects it agrees with Dr. James' powder and the pulvis antimonialis, but that it is more mild, and consequently may be given in larger quantities, seldom producing nausea or vomiting, in doses of less than eight or ten grains." The results I have obtained are very different.

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[a] Read before the Association of the King and Queen's College of Physicians.

I have tried it in twenty cases, selected for careful observation in Sir Patrick Dun's Hospital. The powder was prepared according to the process of the Dublin Pharmacopœia, 1850, by Mr. Morgan, whose accuracy and ability are well known. The dose given in every instance was five grains in the evening and the same at bed-time. The cases were chiefly rheumatism, pneumonia, and bronchitis, and the patients were all adults. In order to present a view of the per-centage of the effects, and to facilitate recollection and comparison with other observations, I have reduced them to the form of decimals.

TABLE *of the Effects of the Pulvis Antimonialis of the Dublin Pharmacopœia*, 1850. *Dose, five grains evening and night.*

More or less gentle Action on the Bowels.	Nausea.	Vomiting.	Perspiration.	Perspiration without Nausea.	No perceptible Effect.
·50	·45	·20	·65	·20	·10

In order to ascertain the effect of the teroxide of antimony taken separately, I tried some prepared by Mr. Morgan according to the Dublin Pharmacopœia, 1850. It was given in three grain doses evening and night, and to the same average class of cases as the above selected in Sir Patrick Dun's and Mercer's Hospitals.

TABLE *of the Effects of the Teroxide of Antimony* (*Algaroth's Powder*), *given in doses of three grains evening and night.*

More or less gentle Action on the Bowels.	Nausea.	Vomiting.	Perspiration.	Perspiration without Vomiting.	No perceptible Effect.
·60	·40	·15	·70	·40	·05

In order to try how far the action of the teroxide could be influenced by the presence of acids, I selected six of the cases in which there had been no effect, or only perspiration, and added to each dose the same weight of citric acid. The result was in every case either nausea, vomiting, or purging. Hence it appears that the teroxide is capable of combining with acids in the stomach, and of forming salts resembling tartar emetic. I find also that the addition of one or two grains to small doses of either rhubarb or aloes produces a remarkable augmentation of the purgative effect of these articles.

The conclusions to be deduced from my observations are:—

1st. That the antimonial powder of the present Dublin Pharmacopœia (1850), differs from that hitherto prepared, not only by containing the antimony exclusively in the state of teroxide, but by medical effects of which the older preparation is nearly if not entirely destitute.

2nd. That as it has not been identified by a distinct name (which is to be regretted), the prescriber should, to avoid confusion, always distinguish it as the antimonial powder of the Dublin Pharmacopœia of 1850.

3rd. That the teroxide of antimony (Algaroth's powder), inasmuch as it contains all the active part of antimonial powder, may be safely substituted for it, the phosphate of lime not contributing to its virtues, and having been at first accidentally associated with it in consequence of the imperfect chemistry of the time when the original process was devised.

4th. That the average maximum dose of the teroxide of antimony, as a diaphoretic for an adult, is three grains evening and night.

5th. That the addition of acids renders it more emetic and more purgative.

6th. That the occasionally violent effects ascribed to it by some of the older writers were most probably due to the presence of chloride of antimony, from want of care in the preparation, and that this may be most effectually excluded by precipitating it from tartar emetic by means of an alkaline solution.

ART. III.—*Selections from the Unpublished Manuscripts of the late* ABRAHAM COLLES, *Professor of Surgery to the Royal College of Surgeons of Ireland.* Edited by his Son, WILLIAM COLLES, F.R.C.S.I., Surgeon to Steevens' Hospital, &c.

(*Continued from* Vol. XVII. p. 90.)

No. 5.—ON VARICOSE VEINS.

THE following is a condensation of a paper I found headed "Varicose Veins," 1826. I do not know why it was not published at that time; since then, the observations of Sir B. Brodie and others have taken away much that at the time would have been new and interesting. But there are still portions of it I think worthy of being recorded.

A varicose condition of the veins frequently arises during the last months of pregnancy; great exertion of the limbs is also assigned as a cause of the disease, and may in some cases have given rise to it; but we so often find it in people who neither stand much nor make use of much exertion; and again, we do not find any exertion of the arms in any labour will produce this state of the veins in the upper extremities,—that we must not lay stress on this as one of the causes of the disease. It generally begins after the meridian of life, occasionally without any known cause. In one case only have I known it to be congenital. We find it commences in two different ways: in one, the small veins on the dorsum pedis and ankles become dark-coloured and multiplied to a great number; in the other, the larger branches or the trunks of the saphena are chiefly engaged.

The veins will become enlarged and tortuous in one portion, and the diseased condition will pass down gradually toward the knee or foot. As the disease advances, the veins become more tortuous in different spots; they swell out into a globe or knot. When these enlargements take place, the skin covering them is gradually absorbed, so that nothing but cuticle covers the veins and adheres very closely to them. The foot and leg are swollen in the evening, after exercise, but an œdematous state of the leg is not an attendant on this disease. On examining the limb we feel portions of the vein of such hardness as to equal that of bone, and others more of a fleshy hardness.

The enlargement of the veins often ceases at the knee, but in some cases the trunk of the saphena, up to its insertion into the femoral vein, is enlarged, and this enlargement is at times not perceptible by the eye. In a few cases the trunk of the femoral vein itself is considerably enlarged from the femoral ring, and is so much affected by coughing, or deep inspiration, as to resemble hernia.

The inconvenience of varicose veins is felt by a sense of weight, heaviness, and fulness of the limb in the evening, and more particularly after exercise. These effects by no means correspond to the swollen state of the veins. We frequently see servant-men whose veins project so much through their stockings as to be remarkable, yet they go through their work with activity, and do not complain. In other cases we hear much of the sufferings of the patient, although the enlargement of the veins is inconsiderable. But sometimes a more serious effect attends,—hemorrhage; this we might expect to occur from one of the large knots so swollen and so thinly covered, yet the fact is otherwise, the bleeding comes from a branch of the third or fourth order, and by a pin-hole opening, and may be so profuse as to render the patient almost exsanguineous where surgical assistance is not at hand. We have only to apply a dossil of lint to the orifice, hold it there till the blood hardens, then place another over this, supported by a roller; when the dossil falls off we find the opening healed.

Varicose veins are in many cases attended with ulcers, supposed to depend on the morbid state of the veins; the correctness of this opinion we are induced to doubt; first, because we do not meet these ulcers in the majority of cases; and secondly, these ulcers present nothing peculiar in their nature or progress.

There is a form of ulcer I believe not previously noticed: it is seated a little above the inner ankle; begins by a small scale of thickened cuticle, which falls off and is succeeded by a larger and thicker scale, and this goes on till, on the falling off, a point is seen, moist and devoid of cuticle. This very slowly and gradually enlarges till it acquires the size of a six-pence, seldom exceeds a shilling; it is quite superficial, does not penetrate the skin; its surface is clean,—devoid of all appearance of granulation or surrounding inflammation; the discharge is small and thin, scarcely penetrates a fold of lint, which it stiffens, and is so adherent as to cause much pain in removing. This ulcer may remain stationary for months. The very painful condition of this ulcer contrasts strongly with its apparent insignificance, the pain generally continuing day and night. In commencing walking it is fully experienced, yet after a while it does not prevent a lengthened walk.

Very generally the skin from the ulcer to the calf of the leg becomes much hardened and thickened, often discoloured, of a reddish or coppery hue, always adhering most intimately to the subjacent parts, so as to be absolutely immovable. There are spots in it extremely tender to the touch in the line of the veins, but in this hard and fixed condition of the skin not a vein is to be seen; the patient is subject to occasional severe attacks of pain along the upper borders.

In the treatment of these ulcers we find emollient applications are perfectly useless, and in some cases aggravate the pain; even a bread and milk poultice has given the idea of its being mixed with poison. The mildest treatment by which I have cured these ulcers is the lotio nigra, and I have remarked that covering this with oiled silk has been attended with heat and excoriation. Lotio flava also is a useful application, or filling the sore with red precipitate, covered with lint, and leaving it there. In some cases I have rubbed the surface with solid nitrate of silver, and this seemed to destroy the great irritability of the sore. When the ulcer is complicated with a line of great hardness along the upper edge of the discoloured skin, near the calf of the leg, I have seen much benefit derived from gentle continued friction on the part with anodyne liniment, or an ointment composed of axunge, one drachm, hydrocyanic acid, ten drops.

Among the more distressing effects of varicose veins should be noticed an inflammatory state of a portion of the vein; this generally commences in the veins in the calf, and may go on to those in the thigh; a slight febrile paroxysm ushers in the attack of inflammation. The skin covering the inflamed vein is generally reddened; in a few instances is not discoloured. The pain is severe at all times, but agonizing if the patient attempts to put the foot down. The vein feels more than usually hard and tender to the touch. The pain continues severe in one part for two or three days, when it becomes more moderate in that spot, but aggravated in some other; in this way the patient may be harassed for fifteen or twenty days.

I have not seen suppuration take place in any case. I have not been able to cut short this inflammatory attack. Leeches do not seem to render much benefit, still they should be applied along the vein. Warm and cold applications will each afford relief in particular cases. I think I have seen most benefit from warm fomentations applied for half an hour, followed by the anodyne liniment, gently rubbed along the course of the vein.

In speaking of the treatment of varicose veins, we need not go back to the early ages of cruel surgery, and remind the reader of the operation of dissecting out the length of the vessel, or the equally cruel one of burning the course of the vessel by actual cautery. These plans were buried in merited neglect, and surgeons contented themselves with recommending bandages, either of a roller or a laced stocking, and they are the means now generally recommended. If we candidly inquire into the efficacy of these means, we will find little we can congratulate ourselves on. We find that patients derive little benefit from either, and they are so inconvenient and heating to the limb, that if persevered in, the patient continues the use more from a dread of the veins becoming worse than from any benefit derived. It is not, therefore, surprising that surgeons should have availed themselves of the operation proposed by Sir E. Home; few operations were more generally practised, and for a short time success seemed to justify the practice, till Mr. Oldenow had the manliness to publish a case of fatal results from the operation. This was quickly followed by so many others, that the profession generally relinquished the operation as one involving great danger. They did not feel justified in putting the man to the hazard of his life for the cure of a disease which was never known to prove fatal when left to nature.

A fatal result of this operation in a case where I had performed it, and also the account of similar cases published by others, determined me to abandon the operation for ever. On reflection I entertained a hope that the patient might be benefited, and the vein even ultimately obliterated, if we could for a long time, by compressing it, prevent the blood flowing through the vena saphena major. When it flowed through the deeper veins the action of the muscles promoted its circulation. I tried pressure on the vein along the condyle of femur, but the pain was so great that, after three or four days, in cases in which I tried it, I was obliged to abandon the practice, and, therefore, applied pressure by means of a steel spring, like a small inguinal truss on the trunk of the vein where it is about to sink through the fascia and enter the femoral vein. This not only gave us command of the trunk after receiving all its branches, but was also best suited for allowing the bandages to remain without slipping, and being on a line with the fold of the buttocks, the latter was a good guide to direct the patient to the part to which it should be applied.

I find these notes dated 1826, but on examining the case books I find the subject engaging attention in 1812, and cases recorded of the application of the bandages on the enlarged vein, and the subsequent adoption of the truss as a palliative remedy; and several cases in which it was used with various effects, when the patient was seen subsequently, which was not always the case. Some of these cases derived little or no benefit from it; but a greater number express in various ways the advantages of it.

One man used it for some months and left it aside, saying his leg was cured. Another, who was previously prevented walking, could now walk ten or fifteen miles without much inconvenience. A lady felt so much benefit from it, while pregnant, she said she would reserve the truss for her next pregnancy.

I can collect notes of about forty cases recorded, where this truss was applied, but in only twenty-one is there any subsequent observation of its effects. Of these fourteen were greatly benefited, nine males and five females; seven derived no benefit, three females and four males.

If we consider the awkwardness or carelessness exhibited by some persons in their ordinary daily transactions, we may suspect many of these reported failures may have arisen from the patient not applying the pad of the truss exactly on the portion of the vein where it dips under the fascia; however, we find in a great majority of the cases recorded, the instrument conferred a decided benefit, and is therefore, I think, worthy of further trial and adoption.

Art. IV.—"*Unsoundness of Mind*," *in its Medical and Legal Considerations*. By Joseph W. Williams, L. R. C. S. I., Licentiate of the King and Queen's College of Physicians, &c.

When Becarria observed,—"The happiest of all nations is that in which the laws have not become a science,"—we are almost disposed to suspect that he had been studying the question of unsoundness of mind in its relation to responsibility for criminal acts; certainly to no subject is the remark more applicable; for, between the diversity of medical doctrines, antagonism of legal opinions, uncertainty and difficulty which have been manifested in determining the greater majority of those cases which the records of criminal jurisprudence supply, we are led to the conclusion that on this particular subject the lessons of experience have been strangely lost sight of; and many doctrines perpetuated with inexplicable pertinacity, in direct opposition to those ordinary rules which in the every-day affairs of life regulate the conduct of men.

Was the question of unsoundness of mind a purely legal problem, we could well understand the advantage to be derived from the retention of the opinions of those whose erudition and intelligence had dignified and shed a lustre on the Bench. Was mental disease of necessity associated with appreciable structural changes, it would be but natural to expect, that, as our capability of ultimate analysis progressed, accuracy in the formation of opinions would have been proportionately attained. Could we regard the mind as a series of simple, untangible creations, which, though immaterial and beyond our reach, were still recognisable by the uniformity of certain operations: in abstract reasoning on their manifestations, the question of mental soundness and responsibility would rest. But, as every day's experience has established that it is not so, it behoves us in all humbleness to forget much of what has been written; for, however we may reverence the ability, or honour the learning, of certain great minds, we must not, in deference to them, permit ourselves to be led from real to logical relations, from particular into abstract considerations, to form general from special rules, or be induced to afford to those arbitrary combinations of their intelligence that impress of reality and unity which the contemplation of an individual case denies.

We firmly believe that a want of harmony must ever exist between the legal and medical doctrines of insanity in its connexion with responsibility. The two cannot be identical, and for this reason:—Law demands a general rule—Medicine admits but a general principle. What would be thought of the physician who undertook in the definition of any, even the simplest, disease, to say, "Certain symptoms must be present"? His theory would lead to a series of disappointments, his practice be a continuation of blunders! Yet, Law steps forward with her definition of unsoundness of mind; and, according to this definition, on which both the life and reputation of society may depend, one half mankind are mad, and half the mad are wise. Divest the mind of the body, establish a common standard of mind for man, and then propound a legal definition; make every question of right or wrong a simple proposition in metaphysical science, with Locke investigate the principles of our knowlege, or with Reid scrutinize the principles of our minds; and, irrespective of all other considerations, let every departure from the acknowledged standard be a crime, and every crime bring its responsibility,—then, and not until then, can Law assume the province of the physician; but, while we acknowledge the humanity of man, and admit that his physical organization influences, not only the development, but also the healthy exercise, of his mind; while we recognise the capability of experience to establish certain relations—which every power of conception founded on that experience approves, without much violence to language or reason, we may regard those relations as necessary, and find in their study just grounds for inductions.

In medicine, as in the other sciences, all propositions become not only untrue, but inconceivable, if necessary axioms be disregarded in their enunciation: the chief characteristics of a sound induction being,—first, its ready identification with our observation of facts; and secondly, the capability it affords us of predication. The law, then, in laying down a general rule by which we are to recognise unsoundness of mind, as also responsibility for crime, is daily opposed by observation, and seeks to establish a dictum that would, were it acted on, lead us into perpetual error; therefore, it may be presumed, the hypothesis cannot be true, since the experience which its deductions afford are at variance with the reality of nature.

We are satisfied that much of the diversity and uncertainty of opinion which prevades medical writings and characterizes legal doctrines is owing to the identification of physic with law. Insanity is, or is not, a disease! If it is not a disease, the law is strangely defective, since, as Dr. Forbes Winslow, in his admirable writings on this particular subject, has so clearly and ably shown, no two chancellors have agreed respecting its constitution; and, not only this, but they have, in their separate opinions, with considerable acrimony, criticised each other's judgments. Thus, in the trial of the case, "Bainbrigge *v.* Bainbrigge," Lord Campbell, in 1850, distinctly states, "There may be mania without delusion;" while Lord Denman, in his charge to the jury in the case "Regina *v.* Smith," had observed in 1849, "To say a man was irresponsible, without positive proof of any act to show that he was labouring under some delusion, seemed to him to be a presumption of knowledge which none but the great Creator Himself could possess." Again, Lord Campbell, in a debate in the House of Lords[a], after alluding to his "very long and very large attention to the subject," said, "He had looked into all the cases that had occurred since Arnold's trial, 1723, and to the directions of the judges in the case of Lord Ferrers, Bellingham, Oxford, Francis, and M'Naughten, and he must be allowed to say that there was a wide difference, both in meaning and in words, in their descriptions of the law:" added to this, the aggregate opinion of the fifteen judges decided in 1843, "That before a plea of insanity should be allowed, undoubted evidence ought to be adduced that the accused was of diseased mind, and at the time he committed the act he was not conscious of right and wrong." Hence, though a man be of a diseased mind, if he is conscious of right and wrong, it follows that he must be considered as a responsible party. All medical experience makes one part of this proposition oppose the other; and, as a consequence, establishes its utter inefficiency; for, in the knowledge of right and wrong is merged the question of diseased mind; whose propounders pre-argue an antagonism, which, though not unfrequent, is by no means necessary; for, while perfectly sound minds may ignore the criminality of a particular act, the distinct knowledge of its criminal nature can coexist with a mind thoroughly deranged. We shall subsequently adduce abundant proofs of the danger which might result from receiving without question the authoritative conclusion, "that nothing could justify a wrong act, except it was clearly proved that the party did not know right from wrong." "Father, forgive them, they know not what they do," was the interceding cry of our pitying Lord when sealing the redemption of man by the outpouring of His blood: "But I obtained mercy," adds Saint Paul, when detailing his misdeeds as a blasphemer, a persecutor, and an injurer, "because I did it ignorantly in unbelief." In accordance with these precepts of divine law, ignorance of the nature and consequence of a particular act has ever been received as a plea in extenuation for its commission, and we seek not to question the validity of such a judgment; but, to say that a knowledge of right and wrong entails, on the one hand, the capability of acting according to that knowledge, or, on the other, indicates a sane state of mind in reference to those acts respecting whose nature that knowledge is evinced, and therefore involves responsibility for crime, is to contradict the dictates of our medical reason, and to oppose the admitted evidence of our daily experience.

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[a] Hansard's Parliamentary Debates, vol. lxvii. p. 92.

It would, in fact, require but little industry to enumerate a host of discrepant legal opinions on the subject of unsound mind, and demand less observation to establish their utter inefficiency; for those opinions, we should find on investigation, to be so far partially true, that they notice frequent phenomena which arise in mental diseases; yet to be entirely in error, when they presume the presence or absence of those phenomena, as essential for the diagnosis of such diseases.

Admitting it as for the present conceded, that the law has failed to satisfactorily meet the question under consideration, we are led to seek wherein rests the cause of its inability to do so. A little reflection satisfies us, that it is in the complex nature of the inquiry at issue. Accordingly, that we may be the better prepared to entertain the various propositions such investigations offer, we shall institute a brief analysis of:—

1st. Those ethico-legal considerations which determine the fact of criminality.

2nd. Those psycho-ethical relations which are involved in the question of psychological freedom, when the physician is called on to declare how far that association which observation points out, as existing between the mental and physical constitution, is adequate for the explanation of certain phenomena.

In their estimation of the first, the physician and lawyer may join hands, each having the same fixed rules for their guidance; since, as Lord Mansfield has observed:—"Every person was supposed to know what the law is." Though, however, we believe it to be essential that the physician have his mind thoroughly impressed with the true association between ethics and law, in order that he be the better enabled to estimate the question of mental soundness in its relation to crime; it is, above all things important, that in his professional opinions he abstain from outstepping the bounds of medicine, which freely consigns to juries the appreciation of the first, while equally denying their capability of adjudicating on the second.

We may, *in initio*, observe, it is a fact no less humiliating than true, that it will not unfrequently occur, when the most important cases come to be decided, there is a direct antagonism in the views of "the highest authorities" on legal as on medical points; unhappily proving, that the soundness of an individual's opinion is not always proportionate to the greatness of his genius; yet, if we scrutinize the cause of this diversity, we shall be satisfied, that in many instances it has proceeded as much from the imperfect means generally applied for their elucidation, as from the obscurity of the subject; and further, that the partial and one-sided view of nature which some have advanced, with more show of eloquence than force of reasoning, at once fails before the test of experience, and the application of those principles, which, in psychical as in physical medicine, render comparison the only safe guide for the establishment of eclectic observation, or the formation of a just diagnosis.

This capability of comparison is by far the most valuable of all the aids which the physician possesses, since by it he is enabled, not only to estimate the relation an altered structure may bear to an admitted standard, as counsel determine the relation of a particular act to the known law; but also, when observing the varying phenomena incidental to the structure itself, he can speak with confidence on the presence or absence of certain conditions which experience suggests as their usual, if not necessary, accompaniments. The first demands, on the part of the investigator, a perfect acquaintance with those criteria of health as well as of disease which are applicable to all. The second implies successive observation of the individual; or the acquisition of an isolated experience, for the just appreciation of special physical and vital phenomena in their individual association, the capability of perfecting which, is in a ratio to the discriminating powers of the physician. Now, in our investigation of organic disease, with all the aids which modern diagnosis affords, the most accurate observation may prove inadequate to the solution of certain problems in which ordinary rules appear not only to be disregarded, but anomalies to exist, requiring for their explanation the inferential rather than the direct application of established principles. The causes which lead to this embarrassment it is not our province now to enter on; but recognising the fact, that in identical organizations, similar changes are manifested by the most diversified and conflicting symptoms, we will be the less surprised, that the mental constitution, which may be regarded as a series of progressive developments, should, for its due appreciation, be beset with much greater difficulties, and in its irregular operations manifest such diversity, as, while altogether confounding the ignorant, too frequently present an enigma to those whose lives and energies have been devoted to the scientific study of psychological disease.

It will hereafter be sufficiently evident, that a greater error does not exist than the supposition entertained by some, who consider the investigation of soundness or unsoundness of mind, comes as equally within the range of the ordinary judgment, as the determination of the abstract criminality of a particular act, when such act is contrasted with the known law. Those who think so, lose sight of the great practical truth, that while the latter is within the reach of all intelligent men, the former, more particularly when considered in its criminal bearings, requires not only a deliberate exercise of the educated intelligence, but also a competency to justly estimate the value of facts, not in their usual but extraordinary relations. Wanting this capability of establishing the psychical associations of crime, the frequent absence of which the records of criminal jurisprudence have rendered us painfully conscious of, we are constrained to believe that life and reputation have been at times sacrificed to the erring vengeance of the law rather than confided to the guarding care of the physician.

Considering laws as the matured offspring of political science, the result of observation and experience, the perfection of reasoning on existing data, and the consummation of the conclusions which those data have afforded, we are prepared to recognise the fact, that with the progress of civilization in separate countries, and the variety of relations in which men are placed with respect to each other, the data being different, the laws which they generate also vary. The same observation is alike applicable to each country, which, as its prosperity and intellectual progress—identified as one is with the other—advance, have the effect of introducing a new set of intellectual pursuits; as the study of new sciences demonstrates the wants or inefficiencies of the old. Our intellectual and social condition being thus progressive and dependent, as it were, on the suggestions of each individual, it becomes of the first importance, that for the well-being and safety of society there be certain fixed principles to guide and govern the movements of the whole; the infringement of which should entail such responsibility as the well-being of the community might necessitate.

The Decalogue has enumerated certain offences as entailing the wrath of God. The Scriptures have offered an unerring rule to direct the conduct of man. Were religion universally felt, and the spirit of Christianity equally experienced by all, other guides would be needless. As however, it is not so, society has promulgated her own codes, taking, as her basis, that revealed principle which marks the difference between right and wrong, so identifying the moral and intellectual faculties in their co-operation. How far these exist independently and thus correct or antagonize, how far they are identified and so uphold and advance each other, is an inquiry which in subsequent investigations we shall enter on.

Human legislation has thus its moral and civil obligations; the former having as their basis divine command, and being in consequence unchangeable; while the latter, depending for their integrity on variable foundations,—it follows, that according to our estimation of the greater principle, the responsibility of the lesser should be determined. And this we find to be practically the case; for though, in the construction of all laws, the actions rather than the motives must constitute the test of crime,—since it would be impossible to frame rules generally applicable to the human heart, its secrets being open to divine scrutiny alone; yet, in the individual application of the law, the act committed is of secondary importance to the motives which induced it, since the latter not only establish an accordance of phenomena as regards the act, but also indicate the intellectual condition from which the act, as the result of the conjoined mental powers, may have originated.

It is for the appreciation of this intellectual condition the evidence of the physician is required,—the psychological as contradistinguished from the legal or logical estimation of motives. He is not called on to declare whether an action be judicious, politic, or useful; whether the motives which prompted it be legally justifiable or otherwise; but to say, have those motives emanated from a mind sufficiently free from disease as to argue a capability of fully exercising healthy volition, even though, in yielding to the frailty of human nature, that volition eventuates in vice, or in following the dictates of ambition, leads to the commission of acts subversive of established rules.

Were medical men to regard freedom from crime as being established by virtue of the purity of motives, excellence of reasoning, or amount of good to be accomplished by acts not consonant with the existing legislature, the standard of justice would be soon reduced to the narrow limits of individual opinion, and all principles of rule be at an end; for, in their estimate of such matters, physicians do not possess greater advantages than appertain to equally well-educated and intelligent men. *Their duty rests in investigating, not so much the relation of the act to the law, as that of the motives which originated it to the mind of the individual.* The ethico-legal considerations belong to the jury; the psycho-ethical to the physician. The former are capable of being determined by all admittedly rational men, and imply:—

1st. The relation of two given data—the act committed, to the known law.

2nd. The estimation of the advantages or disadvantages which might result from the recognition of that act.

The latter associate those relations with a third, or variable power, whose proper estimation demands an intimate knowledge of principles, which, so far from being associated with, are, we might affirm, almost diametrically opposed to abstract legal study.

The question of criminality, simple as it may appear, is one by no means so easy of solution, as first impressions would imply. If, on the one hand, we admit the identification of ethics and law, immorality and illegality become synonymous terms, and we thus presuppose a perfection in human contrivances, which it is no very heavy reproach to say, they can never hope to attain. If, on the other hand, we permit the observance of the law to depend on the estimation of each individual, we are forcibly reminded of the observation of Cicero, "That in philosophy there was no opinion so unreasonable as not to have found some defenders," from which we might infer, that in popular movements no proposition could be so outrageous but many would freely accord to its adoption. It is essential for the well-being of us all, that the equilibrium of social life be preserved, and that, regarding illegal acts as crimes, *quoad* the civil power, no amount of sophistry, or apparent wisdom, absolve the offender from the responsibility his conduct may entail, unless it be proved that the psycho-ethical, as contradistinguished from the ethico-legal, relations of the act, were such as to warrant the belief that the offender was, at the time of its commission, labouring under unsoundness of mind.

Ethico-legal considerations invite to a wide and almost endless field for discussion, and embrace some of the most interesting problems in our social and intellectual progress. It cannot be denied that friendly as ethics and law are to each other, they do not always admit of being brought into close apposition. History affords many instances in which the scaffold has become the altar where justice wept for blood shed, and offences against the law were sacrifices to virtue. Those examples, though happily being exceptions to the general rule, establishing the possibility rather than the probability of similar events, have, by some, been advanced in extenuation of acts subversive of just government, and abhorrent to right-thinking men; therefore it is, all are interested in having the ethical relations of the law so fully understood, that society may be guarded against the excitable and ephemeral ambition of such a class of offenders as Dr. Winslow, M. Georget, and Dr. Belhome have so well described; with whom, as the latter observed, there is often "but one step from exaltation of mind to alienation." All must subscribe to the truth, "that in policy as in architecture, the ruin is greatest when it begins at the foundation," and the foundation of society being its laws, public safety demands that they be maintained. The remarks of Dugald Stewart on this point are, we conceive, of the deepest importance to those engaged in the psychological study of crime. He thus writes:—

"For is it at all consonant with the other arrangements so wisely adapted to human happiness to suppose, that the conduct of such a fallible and short-sighted creature as man would be left to be regulated by no other principle than the private opinion of each individual concerning the expediency of his own actions?—or, in other words, by the conjectures which he might form, on the good or evil resulting on the whole from an endless train of future contingencies? Were this the case, the opinions of mankind respecting the rules of society would be as various as their judgments about the most probable issue of the most doubtful and difficult determinations in politics. Numberless cases might be fancied, in which a person would not only claim a merit, but actually possess it, in consequence of actions which are generally regarded with indignation and abhorrence; for unless we admit such duties as justice, veracity, and gratitude, to be immediately and imperatively sanctioned by the authority of reason and of conscience, it follows, as a necessary inference, that we are bound to violate them, whenever by doing so we have a prospect of advancing any of the essential interests of society; or (which amounts to the same thing) that a good end is sufficient to sanctify whatever means may appear to us to be necessary for its accomplishment. Even men of the soundest and most penetrating understandings might frequently be led to the perpetration of enormities, if they had no other light to guide them but what they derived from their own anticipations of futurity. And when we consider how small the number of such men is, in comparison with those whose judgments are perverted by the prejudices of education and their own selfish passions, it is easy to see what a scene of anarchy the world would become."

From the uncertain and imperfect views entertained by many respecting the pathology of mental diseases, much of this difficulty which exists in determining the psycho-ethical relations of crime has arisen. One class of observers, conferring an unlimited power upon organic construction, thus place out of their account of causation everything beyond the material fabric, and reduce the mind of man to a principle of combination, resulting from the juxtaposition of attracting particles. This philosophy, while being subversive of all distinctions between virtue and vice, teaches its votaries to regard crime and disease as differing only by name, and tells us we are equally to commiserate moral ill and mental alienation, since criminality resolves itself into an act of organic necessity, when, as Dr. Barclay so eloquently observes, "thoughts and actions, however criminal, are, like Spartan thefts, to be held disgraceful only if detected." Equally in extremes, there are those who affirm the perfect independence of mind and body, and will not admit the close relationship between the immaterial principle and material organization. Such theorists, in disease see only vice, and for its cure must therefore admit exhortation alone, since vice is a product which cannot be removed by the annihilation of one of its factors. "Whether," as Dr. Duncan writes, "spiritual existences are really capable of undergoing any alteration in their condition at all analogous to the diseases which affect the corporeal organization, is an inquiry we are altogether incompetent to decide in our present state of existence." Wanting this capability, and admitting mental operations to be untangible, it is only by a process of analogy, unusual mental manifestations can be called disease, in the treatment of which, were they immaterial, and thus beyond our medical reach, the office of the physician must be of secondary, if of any, importance. Our present inquiry does not call for an investigation of this disputed point, further than it is involved in the question of psychological freedom. When, on the one hand, admitting in a measure the views of the first school, we must allow the fact to be a particular truth which experience has established, that every neurosis is not of necessity a psychosis,—this is witnessed in the wide class of the neuralgia, and many affections specially denoting a morbid condition of the nervous centres:—on the other hand, however we be disposed to concede that the mind in its operations seems to exercise an action independent of the organization, we must also acknowledge a further fact, which observation seems to stamp as a universal truth, that without the intervention of nervous matter no indication of psychical action has, or could become manifest. This distinction between universal truths, and particular truths, must be ever carefully maintained in psychological investigations, as teaching, that which is true of all must be true of many; that which is true of many may not be true of one; or again, that which is true of many may not be true of all,—the discrimination of each case depending on experience.

We can imagine the mind as a distinct existence, and the body as a separate creation. We know that there are many maladies of the spirit *in abstracto*, which it is the duty of the minister of religion to treat, as also that many corporeal diseases exist in which the mind is wholly and altogether free; but we further know, for this experience tells us so, that the mind and body exercise a reciprocal reaction, when there are many phenomena which we must be content to study through their operations. In philosophy we cannot always march straight forward to our objects. It is more frequently by examining the opinions of others, and observing the grounds and causes of the mistakes which they may have committed, that we are led eventually to the truth. In psychological medicine this is abundantly exemplified, for, even admitting the existence of originally independent units of mind and body, have we not that complete co-adaptation of the two in the personality, which constitutes the natural or the normal condition of the particular individual when contrasted with other individuals. Now, when this co-adaptation becomes subsequently interrupted, antecedent to, or consequent on, the interruption of the unity, must be, either the imperfection of the units, or the intervention of a third cause, originating an abnormal condition when contrasted with that which had previously existed. If we admit this third cause to be disease, we have it manifesting itself in various phenomena, either those immediately tangible and referrible to the physical organ of thought, or those evidenced through the secondary reactions of deficient or morbidly perverted functions. The object of the physician under either case is to determine:—

I. In a physical point of view, how far certain psychical manifestations are dependent on that abnormal condition we term disease.

II. In a psychical point of view, how far, in the absence of all physical manifestations, purely psychical phenomena are capable of receiving explanations.

Two questions here arise:—

1. Can we always detect the existence of disease?

2. If we could with accuracy define a certain pathological condition, have we, therefore, sufficient grounds to speak authoritatively of the influence it exercises?

In answer to the first, our ordinary observation assures us, that the intensity of the disturbance of functions is by no means proportionate to the changes of structure in organs. As physiologists, it is difficult to believe that purely functional disorders can exist; and each day we are convinced that our inability to discover during life physical evidences of material changes, is no proof that such changes are not present. The very existence of disease implies manifestations indicating organic derangement, while the evidence of our senses frequently fails to establish the presence of those changes, whose reality we must at the same time infer from the vital manifestations. Again: the sudden development of certain phenomena which have eventuated in death, has led to the discovery of such conditions as argued those phenomena to have been but the consummation of a silently progressive morbid process.

The fact is, in mental diseases, we must learn, as Goethe tells us, "to keep within the limits of the knowable," and, like the architects of Laputa, who began to build their houses at the wrong end, be content to study many mental phenomena as the known effects of variable, and, in many instances, unknown causes.

Supposing, as Feuchtersleben writes, "that we are acquainted with all the chemico-organical and microscopical, as well as the physical polar process of the cortical substance of the brain during the formation or reproduction of a thought, have we thereby explained thinking." To this we reply, no more than our minute chemico-microscopical examination of the hepatic structure has unveiled the ultimate mystery of the biliary secretion; or our accurate appreciation of the curative powers of a drug, enables us to speak with confidence respecting each change which follows on its administration. We may infer from this the reply to the second query, and conclude that, though pathology and physiology fail to establish certain and fixed data, they do not fail to establish the most valuable relations, the study of which is the duty of the psychologist; while, in reference to the curative means we so successfully employ, we are cheered in our labours by the assurance thus conveyed, that the actions of man, as his most holy duty and exalted task, may be preformed without requiring certainty in all the problems of human knowledge.

When Sir Wm. Ellis observes, and others re-echo the same sentiments,—"I cannot think that any act, however vicious or eccentric, ought to be considered as the result of insanity, unless it be involuntary and arising from disease of the brain or nervous system,"—they make a bold statement, and one which would pre-argue a capability of diagnosis independent of the evidence of disordered function. We are not, in the present state of knowledge, at all in a position to speak with invariable confidence regarding the connexion of appreciable cerebral disease with unsoundness of mind, further than the fact of their frequent coincidence. Nor can we say such a lesion must of necessity be accompanied by particular phenomena, since varied lesions are accompanied by similar symptoms, and diverse symptoms seem to result from organic lesions in every appearance identical. Nor are we always warranted in declaring an abnormal condition to be the cause of unusual vital manifestations, since the researches of Andral, Dubois, and others, tend to impress the belief, that many of those pathological appearances may be as much an effect as a cause, having primarily a psychical origin; and, by the subsequent contingent extension of their physical alterations, in turn giving rise to a new series of psychical manifestations.

The scientific treatment of mental disease leads us to study the relations of the mind to the cerebral structure, as the means through which its operations are manifested; to regard the brain as the organ of, not the seat of thought, and by reasoning on various pathological facts which experience has collected, to consider similar facts as so far important for the establishment of particular relations, and, at the same time, not to pre-argue an absence of those pathological conditions, because peculiar phenomena may not be sufficiently or prominently present. For, was vitality uniform in its operations, disease should of necessity be a demonstrative science, and statistics propound a certainty in its recognition and treatment.

While, then, we have two sources from which we derive data for our opinions, it appears that neither of them are sufficiently uniform to insure freedom from error. Nay more, that this want of uniformity in their relations must be regarded as being, to a certain extent, a positive argument in depreciation of their separate value. And so it is right that it should be. In allowing that physical signs cannot be always estimated by their symptoms, nor the importance of symptoms inferred from their physical signs, we but admit in psychopathy what we have daily demonstrated in general pathology. How, then, is the physician to decide? We reply, by the close study of the personality, and that individual application of the principles of psychological science, which medical experience can alone suggest.

We know that for the explanation of many psycho-pathical phenomena the presence of anatomico-physiological conditions can be adduced: we may example the morbid perversion of the senses and natural feelings, which during the period of utero-gestation is present with some. It is not to be presumed from this that such conditions are with all an excuse for criminal actions, though the fact be admitted, that criminal acts have resulted from individual emotions identified with such conditions. Again, we witness the strange phenomena which long-continued local irritation may occasion, giving rise to the varied hallucinations of the hypochondriac, and placing the individual altogether at the mercy of merely local sensations. We are not, however, from this at liberty to presume that in all cases, where anomalous pathological conditions are known to exist, that the person so affected can with impunity transgress established rules. That purely physical lesions are adequate to explain many psychical phenomena all enlightened physicians believe. "There are," writes Dr. Winslow, "psychological mysteries which it lies within the power of pathology to elucidate, and which would, without its aid, remain obscure. There have frequently been witnessed deviations from the perfectly correct in conduct, and amiable in manners; exhibitions of petulance of temper, and trespasses against the minor moralities; to account for which, upon a post-mortem examination, there have been discovered traces of painful, and, perhaps, previously unsuspected organic disease." What inference are we to draw from this? That in every criminal case in which the plea of insanity is set forward, the existence of physical disease is of the greatest importance to be considered.

It is needless to repeat the many experiments which have been instituted, or the many cases recorded, in which, coincident with certain material changes or irritations, particular phenomena were so closely identified, as to stand in the light of effects of known causes, nor would it be difficult to quote examples, in which disease proceeded to a fatal termination without manifesting prominent symptoms, until such time as parts essential for the immediate purposes of the vitality became implicated. Drawing an analogy between the development of symptoms in physical, as contradistinguished from mental diseases, may we not fairly infer, that which is true of one equally appertains to the other; and that psychical phenomena, as symptomatic of changes progressing in the nervous centres, may also remain in abeyance, until special circumstances develop their silent consummation, which may be first prominently manifested in the perpetration of some criminal act. Every practical work abounds with illustrations of this double fact, all tending to place beyond question the necessity of remembering, that though the "mens sana" may really or apparently co-exist with an admittedly disordered, as well as a presumed healthy state of body, presumption must not be always received as positive proof; and we are not warranted in asserting, that because a mind may be apparently healthy it is really so; or, because its operations be identical with those of disease, they are, therefore, the result of a morbid process. Since, many psychical phenomena, which in one individual must be regarded as undoubted evidence of a morbidly affected mind, irresponsible for its actions; may, in another, co-exist with, and indicate a perfectly healthy state, arguing a full and undoubted possession of volition and reason,—a fact which will be fully demonstrated when we speak of that form of mental derangement, chiefly evidenced through unsoundness of the moral principle.

It is this apparent anomaly which confounds lawyers, who themselves too frequently seem to forget, and as often lead juries to do the same, that it is not in the abstract consideration, but the particular application and appreciation of principles, the value of a special opinion rests. Counsel acquire their ideas of soundness or unsoundness of mind, as some do their notions of special affections from nosological books which lay down their fixed descriptions of disease. Physicians may, on examination, admit the general truth of the one, and allow the accuracy of the other. Who is there, however, who has stood by the bedside of the sick, and seen the student of the closet, but has felt that the most important part of his knowledge was wanting, in the capability of applying the information he had acquired? The lawyer is this student of the closet! and it would be quite as rational to expect, that the jury, if guided by his opinion on the soundness or unsoundness of mind in a particular case, would place equal reliance on his advice respecting their individual states of health, from detailing to him certain symptoms, whose value as indications of various diseases, nosological works have with equal confidence laid down, a proposition, we are satisfied, to which few would assent, for, in their own cases, they would ignore the compentency of counsel to estimate the practical application of a science which they feel satisfied must be studied in the great volume of nature, written in works, not words.

Willis writes:—" To constitute derangement of the mind, his aberrations must be attended with bodily indisposition." If by " bodily indisposition" we are to presume, such a derangement of the general or special functions as may be evidenced to our examination, we confidently affirm the assertion to be at variance with experience; though, at the same time, we freely accord to the truthful observation of Dr. Winslow. " We are too apt to form our estimate of character, without taking into consideration all those circumstances which are known to materially influence human thought and actions. The state of the organization and the health ought to be maturely weighed before we pronounce authoritatively as to the motives of individuals, or denounce them for not acting or thinking according to what our preconceived opinions have taught us to consider as orthodox." Cheyne, in one of his highly practical essays, declares, he has no doubt " that various immoral and vicious practices ought to be ascribed to insanity." So that the physician has a twofold problem to decide, —the relation of crime to insanity,—of insanity to disease.

What does the question of psychological responsibility imply? The self-mastery of the spirit in its connexion with the personality, in the same way as metaphysical freedom implies, the self-mastery of the spirit when viewed apart from the personality. Now it is only that psychological freedom which is identical with health, that, strictly speaking, comes within the province of the physician:—the identification of motives with a mental condition, or the psycho-ethical relations of a particular act. Those causes which impede self-government and act morally, those faults and vices which society both promotes and punishes, constituting the ethico-legal considerations of the same act, come not, strictly speaking, within the physician's decision unless associated with this mental condition. If we admit his competency to decide on these latter, we permit, as we have stated, as wide a range of opinion respecting each case as there may be difference in the sentiments of medical men. It is only when the diagnostic investigator discovers or presumes the existence of that which we term a mental disease, for whose explanations the principles of medical science are required, that the physician can determine the incapability of being a responsible agent.

The question of unsoundness of mind in its relation to criminal acts is thus a twofold or medico-legal one; the latter may determine the ethico-legal relations as regard the act, the former can alone fix the psycho-ethical responsibility as regards the individual, an assertion which we doubt not we shall be enabled to fully establish.

From this assertion a very important consideration arises. If, as physicians, we confess our inability from any one sign or combination of signs to speak confidently of the presence of disease, on what grounds do we argue to ourselves superior fitness for psychological investigations? The evidence of "unsoundness of mind" is allowed to rest in deviations from that common standard of sanity which the general good sense has approved. Now, allowing the medical man to be alone competent to estimate the influence physical changes can exercise on psychical operations, is it in virtue of the presence of those physical changes his opinion is to be regarded as of value? The following cases arise. An act is committed corresponding in its immediate particulars to those ordinarily appertaining to crime; the plea of insanity is raised;—on the closest examination the physician can detect no traces of physical disease, other evidences of disordered nervous functions than such as are denoted by the consummation of the act being wanting. Again, an individual to all appearances in the enjoyment of perfect bodily health, or, it may be, suffering only from affections commonly met with, is declared to be of unsound mind. In both cases the evidence in support of the assumed mental condition, seems to rest on data appreciable by all.

Does it not appear as if in these cases the question resolved itself into a simple proposition,—the relation of two admitted powers, that of a peculiar as contrasted with an ordinary mind? We admit as much, and reply, the elements in the formation of our medical opinions are not thereby affected, since in the supposition that changes physically appreciable of necessity accompany insanity, we have but an exemplification of a popular error, which confounds phenomena arising in, with the cause of a disease, and, therefore, presumes their presence as essential in proof of its existence. In the manifestation of those symptoms which originate doubt respecting sanity, we may, as we have stated, have the first sensible indication of functional disturbance; and the fact of their previous latency can only be received as proof that they were not prominently developed, rather than that their morbid source did not exist.

Society is fully warranted in being jealous of her rights, and equally justified in seeking to prevent any body of professional men from assuming an authority in reference to matters affecting her interests, those matters being within her own control. Both the bar and the public are, however, deceived, when they presume the general, not the particular, application of medical opinions. The question to be determined in psychological investigation is not whether certain phenomena indicate the soundness of the mind or morals of all men, but how far they may enable us to estimate their relative condition in a particular individual. Were it otherwise, we should presuppose a uniformity in the mental constitution, which ordinary observation negatives. A physician is called on to declare his diagnosis; the value or nature of a certain indication is to be decided; does not his experience dictate a scrutiny,—first, of the special symptoms which may be identified with this indication, second, of the general condition associated with these symptoms? Were he guided by the first alone, it is quite possible that in a single instance he might be right, but more than probable, he would be usually wrong; did he depend wholly on the latter, the presumption is, he should be rarely, if ever, correct.

Where, then, does the value of special or general symptoms rest? In their order of progression and combination; their association with each other; and their relation to the particular indication. Now in mental disease the special symptoms are the manifestations associated with the act indicated, the general symptoms finding their analogues in the ordinary mental operations. The previous history becomes, therefore, as essential for the appreciation of the psychical as of the physical condition. But it may be said those mental operations, constituting the history of the case, are open to the consideration of all, and if this be the basis of your professional opinion, we deny your right to claim any advantage! The history of the case is one thing, the capability of medically reasoning on it another; and though we do not question the logical acumen of many wholly ignorant of medical matters, yet we assert that, in consequence of this ignorance, their capability of reasoning is open to the objection that they must presume variable data as confirmed; whereas it is the establishment of the nature of those data which constitutes the essence of the inquiry.

Medicine is admitted to be a science of observation and analogy, in which experience declares that certain inferences may be drawn from the operation of different agents on organisms which nature has happily ordained should have a close similarity in each. Psychology, while being equally a science of observation, is even more so one of analogy; since the mental organism, being dependent almost wholly on external circumstances for its development, is as a consequence infinite in its variety. The standard of physical health of one is generally but a type of the same condition in many. The criteria of mental health may, it is possible, be peculiar to the individual. Our physical constitution we admit to be influenced by a variety of circumstances over which we have no control, but whose power we can fully appreciate as more or less tending to modify the action of disease. Our mental constitution, it will be seen, while being identified with our physical, and as a consequence under the same influences, having moreover an independent organism, is alike capable of being acted on by circumstances altogether different in their nature. In our analysis of vital actions, as physically manifest, we recognise but the one undivided vital principle. In our analysis of mental vitality, as evidenced through psychical actions, we are presented with a duplicate operation of an integral power, evidenced in the intellectual as contradistinguished from the moral faculties; while, to increase the difficulty, those faculties, to all appearance, seem to acquire an independent existence, since there are abundant proofs that not only may one be exercised irrespective of the other, or harmonize with the other, but it is even quite possible that in their separate operations they may, to all appearance, seem directly antagonistic.

If, then, in the diagnosis of physical disease the history of the case is regarded as essential for showing the order of development, combination, and progression of those indications whose aggregation we are required to determine, how much more important is it, that in mental disorder all previous circumstances be not only fully investigated, but fairly estimated, for determining the influence they may have exercised on those several faculties.

We know that in the physical organization, unless certain functions be duly performed, deviations from the admitted standard of health become sufficiently manifest to constitute disease. Mental operations present, however, innumerable deviations from the approved standard of sanity, and they cannot be received *per se*, as evidence of disease, for this reason, that the mental constitution having no fixed standard, the operations of two minds admittedly healthy may be diametrically opposed, and, owing to the capability of independent action which appears to be exercised by the moral and intellectual faculties, the operations of a sane and insane mind may be perfectly identical, contradistinguishing moral crime from disease. Unless then, in such investigations, the mind be habituated to reason with caution and to question with accuracy, it is open on all sides to an infinity of sources from which error may arise.

In physical diseases we have generally visible or tangible evidences by which to recognise the peculiarity of the organism. In psychical affections we can have no means of estimating the character of any mind except through its operations. It is, therefore essential, for all undertaking such investigations, that they be possessed not only of distinct criteria by which to define mental health, but that they be also fully competent to estimate those various agencies, which, apart from physical influences, act or react on the mental constitution.

We have said " apart from physical influences," for we wish it not to be forgotten, that the physician is alone competent to speak authoritatively in cases where the immediate instrument of thought is involved. We have now, however, to contend that physical causes, altogether remote from the nervous centre, are, notwithstanding their apparent isolation, still capable of powerfully influencing its operations and in a measure modifying their character. Action and reaction are not only to be observed in mind as well as matter, but between mind and matter. It is a mystery involved in the very fact of our existence that such should be the case, since the closest investigation has resulted in no further discovery than that it is so. We are not competent to decide respecting their government or direction, since the same apparent physical causes may co-exist with perfect mental health in one, and in another be identified with, if not the cause of, a directly opposite condition. This fact it is which occasions their presence to be ignored by those who are incapable of duly estimating them.

Surely, it will be said, crime is not clothed in such deceptive robes, or sanity so enveloped in mystery, that fine-drawn subtleties are required for their exposition. Who would not know a villain, who could not recognise an insane? The supposed villain is, however, too often the insane, who finds in the guarding care of medicine his only sympathy or protection!

If, then, it be contended that medical men are so pre-eminently adapted for such intricate investigations, and it be conceded that cases may arise in which the psychical estimate of crime involves many abstruse and difficult considerations, it may be asked, "Why are other than medical juries empannelled to adjudicate on such matters?" To this we reply:—There are many grave and fitting reasons that the existing state of the law should be maintained. Were medical men required to primarily decide on the soundness or unsoundness of mind of an individual accused of crime, unless their opinions embraced the act originating the accusation, their adjudication would be altogether unjust; for that act might be the hinge on which their estimate of his sanity should turn. If, on the other hand, they include this act, the onus of proof respecting the guilt or innocence of the party accused is thereby placed in their hands; and we have no grounds for inferring that, under such circumstances, greater unanimity would prevail than is seen in ordinary tribunals. Were they to assume the act as committed, they should thereby identify the question of the accused's sanity with that of his criminality. These, and many other reasons we might adduce, have fully satisfied us that determining guilt or innocence by the voice of the jury, the soundness or unsoundness of mind by the judgment of the physician, is the course best calculated to maintain public confidence and insure public safety.

We have not in the foregoing observations sought to deny the capability of the jury in many cases deciding the presence of unsoundness of mind. In psychical, as in physical diseases, cases arise in which broad and distinct differences exist, denoting the unhealthy or altered condition. Common sense may as frequently pronounce the wit diseased, as the man without surgical knowledge diagnose the fractured limb. It is not to such examples our remarks apply. The public generally are unsuited, if not inadequate, to entertain many considerations psychological investigations entail. Even allowing they could divest their minds of natural prejudices, and with all honesty and earnestness seek, by the most patient scrutiny, grounds for their unanimous verdict, what does it amount to? The coincident opinion of intelligent men, who, it may be, decide an important question on the observation of an individual case, and thereby confidently declare their capability of fully appreciating the various phases of a most intricate disease, from their knowledge of the operations of health. Every mind has its own standard of mental and moral health, by which it is too apt to adjudicate on that of another. When men repudiate the conduct of another, they identify the feelings of that other with their own. They are conscious that certain deeds should with them indicate particular mental states: they therefore presume they can appreciate the same causes in another through their effects. In many particulars a diseased mind accords with their own: they, in consequence, refer the same capability to that mind. First starting with a proposition which they assume as correct, they then demand that you question not its truth; for, judging as they themselves feel, they decide as they judge. To those we would speak in the words of him who, though one of the greatest reasoners of any age, was not in virtue thereof devoid of error:—"He that would not deceive himself ought to build his hypothesis on matter of fact, and make it out by sensible experience, and not presume on matter of fact because of his hypothesis"[a].

On most trials matters of fact and matters of opinion are submitted to a jury: the value of matters of fact may be open to the judgment of all,—the value of matters of opinion must be proportionate to the capability possessed of forming that opinion. The question of unsoundness of mind in its relation to responsibility for a criminal act may rest on admitted matters of fact, by which it is possible the jury may be enabled to decide the issue; but when those matters of fact come to be estimated in their presumed relations, they are thereby converted into matters of opinion, when, as Hoffbauer has remarked, "the Court should not hesitate to be guided by the same." When, therefore, we read such observations as have been attributed to the Lord Chancellor Truro and others, the former of whom is reported to have declared:—"His experience taught him there were very few cases of insanity in which any good came from the examination of medical men. Their evidence sometimes adorned a case, and gave rise to very agreeable and interesting scientific discussions; but, after all, it had little or no weight with a jury;" we cannot regard the rejection of truth derived from experience under such circumstances as otherwise than being tantamount to the adoption of error, and cease to wonder that even amongst the most able minds charlatanry should be occasionally rampant.

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[a] Locke.

Every psychological investigation entails a deep and solemn responsibility: while we wish not to exaggerate, it would be equally unjust to speak lightly of its difficulties. Character, friends, and fortune, on such occasions, may be at stake. All are, therefore, particularly interested in establishing and upholding the most complete justice for the insane. Who is exempt from the visitation of disease? Confined to no class, identified with no position, peculiar to no country,—old and young, rich and poor, learned and ignorant, our neighbour and the stranger, are alike within its reach. Protean in its shapes, insidious in its approach, direful in its effects, blighting its victim, and spreading desolation around, insanity, while isolating man from his fellows, appeals to their warmest sympathy, and at the same time honours medicine, by intrusting each wavering mind to her especial care.

(*To be continued.*)

ART. V.—*On Extraneous Bodies in the Urethra and Bladder.*

By MAURICE HENRY COLLIS, Surgeon to the Meath Hospital and County Dublin Infirmary.

THE lodgment of a foreign body, either in the urethra or in the bladder, is a grave accident. The difficulty which is frequently experienced in removing it is sometimes considerable, and taxes the patience, ingenuity, and skill of the surgeon; while the dangers which are sure to result from its remaining are so formidable, that every effort must be made to secure its extraction. There are indeed some instances on record in which foreign bodies have remained for months, or even years, in one or other situation, without producing the disturbance which in other cases a few hours suffice to bring on[a]; but it is scarcely necessary to remark, that these are curious exceptions, and of little or no practical value. The urgent sufferings of the patient, in general prevent a moment's unnecessary delay in

[a] Frère Jacques, when at Fontainebleau, operated on an Irishman for a stone, the nidus of which was a bullet which had entered his bladder eighteen years previously through a gun-shot wound of the abdomen. Beaulieu removed, through an incision in the perineum, a piece of a barometer tube four inches and three quarters long, which had lain in the urethra and neck of the bladder from June to September.

operative interference. Retention of urine may be caused when the neck of the bladder or the urethra is in part blocked up. Fragments of catheters, and substances of similar shape, are liable, when they slip completely into the bladder, to fall across the cavity. In this position they generally produce intolerable pain, from the spasmodic efforts to expel them, and if left there will perforate the coats of the viscus. In all cases, the probable occurrence of acute inflammation of the bladder or prostate must be taken into account, together with the certainty that, sooner or later, the foreign body will become encrusted with calculous concretions.

It may be well, before detailing a case which lately fell under my care, to refer to a few of the most remarkable which are already upon record.

In Chopart's "Maladies des Voies Urinaires" we find the following:—

A female, aged 25, was obliged during her pregnancy to have the catheter repeatedly passed. After one occasion she suffered severe pain, which continued for several months. She consulted Mr. Ford after her accouchement for a urinary fistula in the centre of the buttock. Having discovered from the history of her case, and by sounding, that the catheter must have slipped into the bladder upon the occasion referred to, he succeeded in removing it by the urethra. In this case it was lodged obliquely across the bladder, and one end of it projected into the commencement of the fistulous track. The instrument was an ordinary female catheter.

Of substances which were lodged in the urethra, and which required some ingenuity for their removal, we have many examples—two will suffice.

A porter pushed into his urethra a gold pin six and a half inches long. Desault removed it by forcibly bending the point back, while he drew the remainder forward by the forceps. The urethra was considerably lacerated by this manœuvre. In "The Dublin Medical Press" for June 30, 1841, there is an account of a similar accident which was managed in a somewhat better manner by M. Bonnet. He bent the penis forcibly so as to push the point of the pin through the integuments, and pulled it out as far as the head permitted—then he had merely to turn the head in the opposite direction and to withdraw it with the forceps. In a similar case it seems likely that the pin could be grasped with the urethral forceps and its point disengaged from the wall of the canal, when a small elastic bougie might be passed down alongside the forceps, and with a little care could be pressed against the point of the pin, and all could then be withdrawn together.

In "The Lancet" for February, 1852, a case will be found recorded in which Mr. Birkett of Guy's Hospital removed the handle of a magnum bonum steel pen, five and a half inches long, which the patient had used "to stir up the sand and get rid of it at once." Traction by the forceps failed, owing to the end which was grasped by them being somewhat square, and catching in the floor of the urethra. Mr. Birkett, therefore, cut down upon it in the mesial line in front of the bulb; the removal was now easy, and the incision closed rapidly.

Among numerous cases in which fragments of catheters and bougies have slipped into the bladder, I find one so curious that I cannot resist the temptation to transcribe it. M. Poinsable, Governor of Martinique, habitually employed leaden sounds for disease of the urethra. One of these broke, and a portion, about four inches long, slipped into the bladder. Here it gave rise to symptoms of stone, and in 1749 he came to France to consult Ledran. After numerous experiments upon animals, Ledran came to the conclusion, that he could dissolve out the fragment by repeated injections of mercury into the bladder; and after pursuing this plan for eight days, all the symptoms had disappeared. M. Poinsable was pronounced cured. He returned to Martinique, and died soon after. The opening of his body showed that the sound had suffered so little alteration that the minute irregularities which still existed at the broken part corresponded accurately with those upon the other fragment. This was a sorry termination to Ledran's numerous essays and solemnly conducted experiments. One of the latter consisted in extracting the lead from the mercury when it returned from the bladder[a].

A volume might be written on the cases in which lithotomy has been performed for the extraction of extraneous bodies from the bladder.

The variety of these substances is extraordinary;—bullets, pieces of bone, pins, needles, needle-holders, tooth-picks, ear-picks, beans, straws, ears of corn, small pebbles, hair pins, wire, handles of tobacco-pipes, plum and cherry stones, pieces of coal, besides fragments of bougies, &c., have got into the bladder, sometimes by accident, more frequently by the voluntary act of the patient, either for the purpose of onanism, or in the endeavour to draw off water, or with a view to excite compassion by the exhibition of anomalous symptoms. Sometimes a companion, from frolic or wickedness, may have forced them in while the sufferer was drunk and unconscious. Many of these substances would now be removed by forceps, particularly if the neck of the bladder were previously dilated—too much time, however, should not be spent in doing so, as the deposit of calculous matter goes on with great rapidity. This appears to be generally composed of lithates and phosphates; the harder varieties of calculi, for obvious reasons, are less frequently formed upon these nuclei.

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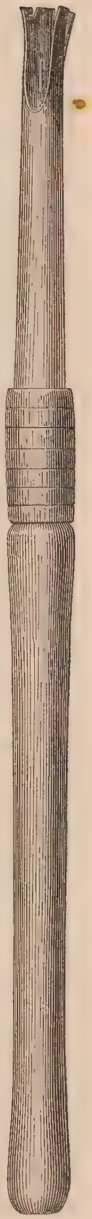
[a] See Mercure de France, November, 1750.

All substances with smooth surfaces have a tendency, when lodged in the urethra, to work their way into the bladder. It is not easy to give a satisfactory reason for this. Some account for it by an anti-peristaltic action of the urethra, others by a power of suction in the bladder. There is no evidence of the existence of either force; and the latter hypothesis supposes an active, rather than a passive, expansion of the bladder. Possibly the upward movement of the diaphragm exerts a constant, though slight, expanding force upon the bladder; while the expulsive force of its downward movement is resisted by the sphincters and perineal muscles. Be the explanation what it may, the fact is certain that fragments, even of heavy leaden bougies, will travel towards the bladder in defiance of gravity. Once lodged there, such bodies invariably take a horizontal position; they lie across the internal orifice of the urethra, and the difficulty of extracting them is increased. The knowledge of these facts will lead the surgeon to use every effort to remove them while some portion still remains in the urethra.

The following is the case to which I have above referred as having occurred lately in my practice.

A shoemaker, aged 56, came into the Meath Hospital, at 3 P. M. April 24, last, in a state of great excitement, and apparently suffering much pain. He stated that he had passed a bone tube into his bladder and could not get it out. Upon inquiry it appeared, that he had laboured for years under an irritable condition of the bladder, with sandy deposits in the urine, and occasional spasmodic stricture. He had been in the habit of passing a bougie two or three times a week. About two years ago his bougie was worn out, and since then he employed a bone enema tube; as it was not long enough he added a piece of quill to the outer end; by keeping a tight hold of the quill he was able to insert this sufficiently far to overcome the obstruction, and with an occasional renewal of the quill this implement had served him for two years. On the evening previous to his admission, contrary to his usual custom, he had lain down when passing in the tube, and in the act of rising, it had slipped from his fingers and disappeared in the urethra; at every effort to grasp it, it went farther in, and at last when it began to give him pain he ran to the hospital for relief. The urine had come trickling away through the instrument when he made efforts to expel it; the end of the quill could be felt easily in the region of the bulb, where it made a considerable prominence in the mesial line; I could also feel it in the bladder, but I was not able to reach its distal extremity; every effort to bring it forward failed; the jagged edge of the quill caught in the floor and walls of the urethra, and it was only more deeply plunged by every touch. The great pain which the patient was suffering, and my fear lest the tube should slip entirely into the bladder, prevented me from waiting until a pair of urethral forceps could be procured; I, therefore, had him placed in the position for lithotomy, and passed a small grooved staff down to the quill; I found that there was room to pass the staff alongside the quill into the bladder. Having done so, I gave the staff to one of my assistants; I then drew down the rectum with my left forefinger, and with a small narrow knife I made an incision, one inch in length, in the mesial line, commencing an inch and one-third from the margin of the anus, and ending just at the verge of it; this divided the integuments and some fibres of the superficial sphincter. I now put the point of my knife into the centre of this wound and pushed it on directly parallel to the course of the rectum, until it had penetrated to the depth of an inch. I then withdrew my finger from the rectum, and took the staff in my left hand; pressing it down towards the rectum, the point of the knife came in contact with it, and without difficulty entered the groove. I made an incision along the floor of the urethra of about a quarter of an inch, and distinctly felt the foreign body strike the knife during the violent contractions of the bladder; withdrawing the knife, I introduced my forefinger into the wound, and got my nail into the groove; I now withdrew the staff, and with a slight turn of my finger I disengaged the point of the quill from the wall of the urethra, and guided it by my nail into the little opening, from which it was easily withdrawn by a small dressing forceps. There was scarcely a drop of blood lost. The wound was so small that my finger completely filled it during the removal of the tube, and a small plug of lint was inserted into it immediately, and secured by a compress and bandage; these were removed in the course of a few hours. A full-sized catheter was passed the next morning and the water drawn off. He was ordered to take an ounce of the following mixture three times daily: infusion of buchu, seven ounces; camphorated tincture of opium, half an ounce; aromatic spirits of ammonia, and Brandesh's alkaline solution, of each, two drachms.

The little wound became gradually smaller, and at the end of forty-eight hours scarcely a drop of urine came through it. He left the hospital on the fourth day.



The length of the bone tube was four and a half inches, that of the quill two and a half, of which half an inch was inserted into the thicker end of the tube, so that the total length of the apparatus, as it lay in the urethra and bladder, was six and a half inches. The quill had evidently formed part of a pen, and was split and jagged at the end. The thickest part of the tube is about four lines in diameter. I have not been able to find a case recorded in which a straight body, of such a length, has been pushed so far into the bladder. Mr. Birkett's case comes nearest to it; in his, however, the point of the staff went a much shorter way into the bladder, for its whole length was five and a half inches, and the end of it projected in front of the bulb, while in this case the tube was six and a half inches long, and had advanced so far that the end of it projected just in front of the anus. I preferred to remove it by an incision in the mesial line in front of the anus, knowing that from the shallowness of the man's perineum, I should have no difficulty in hitting the staff through a small opening; and that by keeping parallel to the rectum I had abundant room to steer clear of the bulb. The membraneous part of the urethra is not more than an inch to an inch an a half distant from the verge of the anus (varying according to the depth of the perineum), hence we can strike it with ease and certainty from the point specified, when the perineum is in a healthy condition; by drawing the rectum down with the forefinger, while an assistant raises the bulb towards the pubis by the staff, the knife can be inserted with safety to the depth of an inch or so in the mesial line, and then, by depressing the curve of the staff, the point of the knife comes directly in contact with the membraneous portion. If the incision be made accurately in the mesial line no vessels will be wounded, and as the membraneous portion only is opened, there can be no extravasation of urine forwards. The incision in the integuments might be enlarged by commencing it farther forwards, if necessary to give room for the extraction of a larger substance, or for the introduction of the finger and forceps together. This route to the bladder is the most direct, and the least liable to hemorrhage and extravasation; and it seems to me it should be chosen in preference to any other, when the size of the foreign body admits of it. The membraneous portion is not only the narrowest part of the urethra, but is also the least dilatable, and when it is divided, the urethra will admit of the passage of comparatively large bodies. Even when the fragment of catheter or other foreign body, has slipped into the bladder entirely, this would appear to be the easiest and least dangerous operation for extracting it.

Art. VI.—*The Behaviour of the Pelvic Articulations in the Mechanism of Parturition.* By J. Matthews Duncan, A. M., M. D., F.R.C.P.E., Lecturer on Midwifery; Physician Accoucheur to the Royal Dispensary, Edinburgh, &c. &c.

In the lower animals we find beautiful examples of the changes taking place in the pelvic joints in the end of pregnancy. And the intimate nature of these changes is most satisfactorily studied in these animals, because in them it is comparatively easy to procure specimens of the altered tissues at any period, and still more so, because in many of them the changes are to an extent far exceeding what is even found in the human female. In illustration I may, at present, cite the changed condition of the pelvis of the Guinea pig, and of the cow. In the former, there takes place, at the time of parturition, a very considerable separation of the pubic bones; the ligamentous tissue stretching, in this small quadruped, to the extent of an inch, or even more. This enlargement of the pelvic circle, by separation of the pubic bones, necessarily implies great relaxation of the tissues on the anterior or inferior part of the sacro-iliac joint, and freedom of motion in it. After parturition the pubic bones again become closely united.

In the cow, the changes in the pelvic joints differ in some important respects from those just described as occurring in the Guinea pig. In the latter, it has been stated that the most notable change is the elongation of the ligaments of the symphysis pubis (nature in this way foreshadowing the operation of symphyseotomy), and the separation of these bones giving rise to corresponding motions in the iliac bones, analogous to the abduction of the limbs. In the cow, on the other hand, these movements are completely absent. The symphysis pubis is consolidated by bony union, and thus incapable of distention, and consequently the abduction of the iliac bones is impossible. But, nevertheless, the changes in the cow's pelvis are of great importance. They have lately been described by Professor Barlow, of the Veterinary College[a], and I had an opportunity of demonstrating them upon Mr. Barlow's preparation to the members of the Edinburgh Obstetrical Society. They consist in an increased development of the large sacro-sciatic ligaments, which, from being of moderate thickness, and in a state of tension in the non-pregnant cow, become much increased not only in thickness, but also in length, and are thus made slack and yielding. The tension of these ligaments tends to fix the sacrum and consolidate it with the ilia, and their relaxation leaves it freer to move. Further to facilitate this motion, the sacro-iliac joints, which in the non-pregnant cow are described by Mr. Barlow as secured by a material closely resembling intervertebral substance, now have the opposing bony surfaces smooth and lubricated, and the surrounding fibrous ligaments relaxed. By these changes the ilia become extensively movable upon the sacrum (or *vice versâ*), in an antero-posterior direction, the motions being analogous to those of flexion and extension in the limbs. The final result of these changes and motions is to enlarge the genital passages in this animal.

It has hitherto been customary to regard the articulations of the pelvis in man as virtually immovable, and to describe in the female at the time of parturition cases where motion evidently takes place as morbid in their character. But Mr. Zaglas[b] has lately pointed out that in man there is distinct motion of the ossa innominata in an antero-posterior direction, or upon an imaginary line passing transversely through the second sacral vertebra from one side to the other. In other words, the sacrum may be described as having a nutatory motion upon this imaginary transverse axis, the promontory of the sacrum advancing downwards and forwards, while its apex moves in a contrary direction, and *vice versâ*. In the downward motion of the promontory, which in the non-pregnant is to the extent of about a line, the brim of the pelvis is diminished to the same extent in its conjugate diameter, while the corresponding upward motion of the apex of the bone to the extent of about two lines puts the sacro-sciatic ligaments on the stretch, and enlarges the dimensions of the outlet. By observations on the living and on the dead subject, Mr. Zaglas has shown that in the erect position the sacral promontory is not in the position of greatest projection into the brim of the pelvis, but the reverse, and consequently that the apex is in its forward position diminishing the outlet, and relaxing the sacro-sciatic ligaments. When the body is bent forward, on the other hand, the base of the sacrum is protruded into the brim, the apex is tilted upwards, the sacro-sciatic ligaments put on the stretch, and the outlet of the pelvis consequently enlarged. These movements take place ordinarily in both man and woman, but in her they are of greatest interest and importance in the function of parturition. Before entering on this part of the subject, I shall first point out some peculiarities in the pelvic articulations in woman, and describe the changes taking place in them in the end of pregnancy.

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[a] Monthly Journal of Medical Science, January, 1854, p. 83.

[b] Monthly Journal of Medical Science for Sept., 1851, p. 289.

The three large pelvic articulations present the following important peculiarities in regard to their mode of union:—Each articulating surface of bone presents two distinct parts; the one, comparatively smooth, covered with cartilage and only partially united to its neighbour; the other, rough for the attachment of very strong and numerous bands of fibrous and fibro-cartilaginous tissue firmly uniting it to the corresponding surface of its neighbour. The former surfaces form the anterior and inferior parts of the sacro-iliac joints, and in the skeleton are known as the auricular surfaces. In the symphysis pubis these surfaces form the superior and posterior parts of the joint. Interposed between the investing cartilages at these parts is a synovial bursa. It is on these surfaces that the articular motion is most free, the ulterior advantages of which, in the physiology of the erect position, &c., this is not the place to demonstrate[a].

Mr. Zaglas points out that on the os innominatum we may divide the entire articular surfaces into four parts. The two antero-inferior of these correspond to what is called the auricular surface, and are inclined to one another at an angle which looks outwards, and forms a ridge inwards. The two posterior superior surfaces (which are separated by a large mass of fibrous ligamentous tissue from the corresponding surface of the sacrum) are inclined to one another at a similar angle; and there is accordingly a crooked ridge running between the four surfaces in a direction from the spine to the symphysis. Taking the four surfaces, however, in another relation, it may be seen that the two posterior superior surfaces are separated from the two anterior inferior by a groove (running nearly parallel with the axis of the sacrum), and are inclined to them at an angle which looks inwards. The consequence of this arrangement is, that while some motion is permitted, any tendency to displacement is entirely obviated, so long as the innominate bones are retained in a due degree of proximity by the pressure on the acetabula, and by their ligaments[a]. But besides these just remarks on the general arrangement of the whole joint, it is important to notice another striking peculiarity always observed, and frequently in a very marked degree. This consists in the existence upon the posterior articular surface of the ilium of a bony prominence of irregular outlines, but frequently assuming the form of a solid projecting angle. This projection is found to correspond to a distinct cavity on the opposed surface of the sacrum, which is, in some of its functions, analogous to a cotyloid cavity. For, upon these parts (which are generally on a level with the upper part of the second bone of the sacrum) the motions of the ilia must take place; and whilst they will offer no absolute resistance to the motions of the ilia upon the sacrum analogous to flexion and extension in the limbs, they will, like the general arrangement of the entire articular surfaces of the articulation, prevent the slipping upwards or downwards of the one bone upon the other, motions which would necessarily prejudice the security of the erect position.

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[a] In a specimen I exhibited to the Obstetrical Society there is a double synovial bag in the symphysis pubis. This joint was removed from a virgin about eighteen years of age. For a fuller exposition of these anatomical points see the Traité des Accouchements of P. A. Dubois; also Mr. Zaglas's Observations on the Symphysis Pubis, in Monthly Journal for Nov., 1851, p. 489.

In the latter half of pregnancy the soft tissues contributing to form the pelvic joints are invariably, or almost invariably, found softened as if by serous infiltration; and the joints are consequently relaxed. All anatomists and obstetricians[b], who have paid attention to this subject, agree in this statement. The softening of these tissues is generally accompanied by their increase in thickness, a change which will in itself have, as a necessary consequence, the separation of the bones, and the enlargement of the pelvic circle. And I have no doubt that this favourable circumstance, together with others connected with the motions of the joints to be presently discussed, forms an important part of the explanation of some cases of delivery, by a simpler operative procedure than was predicted to be necessary. Indeed, the experiments of MM. Giraud et Ansiaux[a] seemed to them to show that in contracted pelves this change in the joints takes place to a greater extent than in well-formed pelves. In some cases the thickening of the tissues goes on to quite an extraordinary extent. Boyer states that in one case he found the sacro-iliac joint separated to the extent of half an inch; Chaussier found the symphysis pubis separated still more in an easy labour, and Madame Boivin asserts that she sometimes found the pubic bones separated to the extent even of an inch. In some cases, as in those of Smellie, Diemerbroek, and Denman, the separation appears to have taken place chiefly during the course of a difficult labour.

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[a] See Report of the Physiological Society, *loc. cit.*

[b] See Burns' Principles of Midwifery, p. 8; Velpeau, Traité des Accouchements, Bruxelles, p. 122; also Moreau, Traité des Accouchements, tom. i. p. 40.

But although there can be no doubt as to the thickening and softening of the tissues forming the pelvic joints, there is great difference as to their capability of motion. In this country, indeed, most authors seem to think that motion in these joints in pregnancy is always to be considered the result of a morbid process. This opinion is, without doubt, erroneous, although there are observed not unfrequently cases where the natural relaxation of these joints increases to such an extent as to interfere with the function of progression[b].

The observations which I have already made upon the movements in the pelvic joints in the non-pregnant set aside at once all the arguments adduced to show that there is naturally no such mobility in pregnancy, and that when movements are observed in these joints a morbid condition exists. Founding upon what has just been stated as to the condition of the ligaments of the pelvic articulations in the latter part of pregnancy, we can, without difficulty, assert that at that time the pelvic bones enjoy freer and more extensive movements than at other times. In very numerous cases scattered through obstetric literature, where these joints have been examined after delivery, authors have described the mobility of these articulations, sometimes, indeed, as being to a very great extent. In addition, cases are not very unfrequent where these movements, either from their freedom and extent, or from their causing pain, attract the attention of the patient and physician. They are then sometimes easily perceived on making the proper examinations.

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[a] Jacquemier, Manuel des Accouchements, tom. ii. p. 476.

[b] Some extraordinary observations have been made by obstetricians in regard to certain motions of these bones in difficult labours, and under the influence of the pressure of the presenting part. For instance, Madame Lachapelle mentions a case where one ilium became dislocated forwards upon the sacrum, so as to enlarge the oblique diameter of the pelvis, through which the head was passing. Others have described a similar dislocation of both bones simultaneously.

The movements which occur may be described as consisting in the elevation and depression of the symphysis pubis, the ilia moving upon the sacrum; or if the sacrum be regarded as the moving bone, it describes a rotatory motion upon an imaginary transverse line passing through the second bone. By the elevation of the symphysis pubis (or nodding forwards of the promontory), the angle of inclination of the pelvis is lessened, and the conjugate diameter of the brim of the pelvis is diminished to the extent of one or even two lines; the corresponding diameter also of the outlet is increased probably about twice as much. This different ratio of the effects of the motion upon the brim and outlet results from the fact of the centre of motion being much nearer the promontory than the apex of the bone. The promontory, therefore, will describe an arc of a smaller circle than the apex.

That the alteration of the dimensions of the brim and outlet by these movements is not insignificant, but the reverse, is a proposition which every obstetrician will confirm. It only remains, then, to be observed how these alterations correspond with the phenomena of the progress of the child in parturition. Now it has been already stated, that in the erect position the brim of the pelvis is in its enlarged condition, the symphysis pubis being then depressed, while the outlet is correspondingly contracted. Now in the course of the first stage of labour, while the head is pressing into the brim, the human female is generally standing, sitting, or lying on her back, or in an easy position. But as soon as the head has descended into the pelvis and impinged upon the sensitive vagina, then forcing efforts accompany the pains. These forcing efforts consist, in great part, of powerful contractions of the anterior abdominal muscles, the effect of which, especially the action of the two recti muscles, will be to tilt up the symphysis pubis, thus throwing the promontory forwards, contracting the brim, and enlarging the outlet, and diminishing the angle of inclination of the pelvis. To all these changes the position usually assumed by the female in the second stage of labour will contribute. For it has already been stated, that the simple bending of the body forwards has for its effect the tilting upwards of the apex of the sacrum and enlarging of the outlet. And it is a curious fact, that a woman in her forcing pains, in the second stage, is found to draw up her legs, and bend her body forwards, thus inducing changes in her pelvis which facilitate the advance of the child in that stage.

The motions of the pelvic bones, which we have been detailing, agree exactly with those which take place in the cow in parturition. In that animal the first effect of each pain is to elevate the tail, and thus enlarge the outlet for the escape of the calf.

The mechanism we have just been describing in the human female is analogous to that which we have previously shown to occur in the pregnant and parturient cow. The changes which occur at the time of labour in the Guinea pig find their analogues in the altered conditions of the symphysis pubis in the human female. But in her they are only to a small degree comparatively. It is important, however, to remember, that in this joint the thickening of the ligaments is generally more apparent than in the sacro-iliac joints. The distention of the pubic ligaments will be easier in the recumbent than in the erect attitude, which last implies strong compression of the tissues of the joint by the pubic bones. Moreover, the separation of the thighs, which is habitually practised at the latter part of a labour, will favour any possible slight separation of the pubic bones, especially if the internal femoral muscles are in a state of contraction while the thighs are apart. Indeed, the study of the whole subject illustrates beautifully how nature leads the human female in the act of childbirth to assume positions and make exertions which are necessary for perfecting the mechanism of the process.

There is another source of information as to the state of the pelvic joints, especially the sacro-iliac, namely, the results of section of the symphysis pubis, an operation which appears to me to have been prematurely abandoned. In the performance of this operation upon the living female in order to aid in delivery, it has been found that the pubic bones can be separated to the extent of from one and a half to two or even three inches, without any damage to the sacro-iliac joint, or with the result of merely lacerating the capsular fibres of the anterior part of the articulation. In many of the cases the pubic bones, after the division of the symphysis, seemed to part from one another with resiliency, as if their union counteracted some force tending to separate them. This phenomenon admits of two explanations: either by attributing it to the weight of the limbs acting upon the acetabula, or by ascribing it to the elasticity of the great mass of elastic fibrous tissue in the posterior and upper parts of the sacro-iliac articulation, which is not resisted by the different mode of union in the anterior and lower part of the joint as already described. In the pelvis of the male and non-pregnant female, when this operation is performed after death, it is found that a separation of from one, in some cases, to even two inches can be effected without injury. These facts illustrate the relaxation of the sacro-iliac joints at the end of pregnancy. They are, however, perhaps of more importance in regard to symphyseotomy, as showing the amount of separation that may be produced without injury. But the dread of injury is probably, in the main, a groundless fancy; for we know that to destroy the sacro-iliac joint, after section of the symphysis pubis, it is necessary to use great force, a circumstance which is, in itself, the best guardian of the safety of the joint.

The operation of symphyseotomy, as reintroduced to the profession in 1768 by MM. Sigault and Le Roy, is one which has, with justice, been condemned. But the jealousy of the Academy of Surgery, which discountenanced M. Sigault's operation at the first, led the members, after the subsidence of the excitement produced by its first and only occasional successes, to repeat their condemnations of it, and prevented its obtaining a fair consideration. It yet remains to be seen whether the operation, as more broadly proposed, long before Sigault, by Severin Pineau, may not be one which is destined to have a small place among the operations of practical midwifery, devoted to saving the life of the unborn child. In this country the operation received, after its proposal by Sigault and Le Roy, the high sanction of W. Hunter and Denman, so far as its own peculiarities were concerned. But they, at the same time, showed that it could be of very little, if any, service, in the cases for which it was proposed, namely, those of extreme pelvic distortion where Cæsarean section would otherwise be required. In this condition matters have been allowed to rest. British obstetric authors have loaded the operation itself with calumnies which are quite unfounded, and raised difficulties about it which are sufficient to deter a superficial inquirer from its consideration.

There is every reason to believe that the operation, in itself, is one of slight danger at the time, or even ulteriorly, if compared with the dreadful results of craniotomy and Cæsarean section. For the latter operation it can very seldom be a substitute. But it remains to be seen whether the former, namely craniotomy, may not in some cases be superseded by it. There is every reason to think that the operation would be much less dangerous to the mother than craniotomy, even with the allowance of great freedom in the selection of cases; and it would give a chance of saving the child, whose life is necessarily compromised by that proceeding. Moreover, the operation might probably be simplified by adapting to it the subcutaneous method.

I conclude these remarks with the following quotation from the most esteemed author in British obstetrics, whose name and influence have contributed greatly to the neglect into which the operation has fallen:—

"It is proved," he says, "in the first place, that some enlargement of the capacity of the pelvis is actually obtained by dividing the symphysis of the ossa pubis.

"Secondly, that the evils which have followed this operation have been very much occasioned by its being performed unskilfully, or by injudicious endeavours to increase that enlargement of the capacity of the pelvis beyond the degree which naturally follows the division of the symphysis.

"Thirdly, that many women who have undergone this operation have recovered; though of those who recovered, many suffered very serious complaints for a long time, or for the remainder of their lives.

"Fourthly, that some children were born living when this operation was performed.

"We may, therefore, presume to say that if a case could be so precisely marked that there should only be a deficiency of just so much space as would be supplied by the simple division of the symphysis, the operation might in that particular case be considered.

"We may also say, that this operation is not so certainly fatal to those women on whom it may be performed as the Cæsarean operation; nor so certainly destructive of children as that of lessening the head.

"We may, then, be allowed to suppose a case, and such a one is more than possible, in which a person of very high rank, the life of whose child might be of the greatest public importance, could not be delivered without the destruction of the child, or her child be preserved but by the Cæsarean operation at the expense or great hazard of her life; and that she, through human frailty, might refuse to submit to the Cæsarean operation, yet the great interests and policy of the nation might forbid the destruction of the child. Of course both the mother and child would be inevitably lost. Should such a case occur, which, as I said before, is more than possible, then the section of the symphysis of the ossa pubis might be proposed and performed, as it would in some measure meet both these interests; being less horrid to the woman than the Cæsarean operation, and, instead of adding to the danger, give some chance of preserving the life of the child."

This testimonial from the eminent and sagacious Dr. Denman is the more extraordinary, as he is an author who joins strongly in the cry against the operation, and expressly says, in regard to the above passage quoted from his own work on Midwifery, that he does not "mean to insinuate a wish or advance an argument in favour of this operation, in the cases for which it was originally proposed, or any other which can be imagined."

The last paragraph of the passage just quoted gives in few words a general notion of the cases to which this operation may yet be adapted. But it must be remembered that, in our day, a section of this class of cases has already been provided with a suitable treatment in the operation of premature labour; an operation, however, whose use is not inconsistent with the simultaneous use of symphyseotomy.

Art. VII.—*Cases of Poisoning by the External Application of Corrosive Sublimate.* By H. R. de' Ricci, Medical Officer of the Ballymahon Union Workhouse.

Cases of poisoning by mercurial preparations are of so rare occurrence, that I am induced to lay before the profession the following account, in which death was the result of the outward application of corrosive sublimate for the treatment of porrigo of the scalp.

P. and W. B., brothers, one aged eleven, and the other seven years, had been suffering from tinea favosa, or porrigo, for a very long period. As well as I could discover, the eldest had laboured under it for about six years, and the youngest for about three.

They first came under my notice about a year ago, when they applied for relief at my dispensary; but finding, I suppose, that the cure was not proceeding sufficiently quick, and that I was not torturing their heads with painful applications, they soon gave up attending; and eventually, in April last, they applied to one Corny Mack, a shoemaker by trade, but well known through the country as a "skilful man," and he engaged to cure them in *a week.*

I am induced to believe that they were displeased with my mode of treatment, because on several occasions they *complained* that the ointment I gave them *caused no pain*, and they several times asked me for pitch plasters, which I always refused; for I have found by experience, in my workhouse hospital, that Dr. Neligan's mode of treatment is decidedly the only one I know of, which offers a chance of cure. I speak thus decidedly upon this matter, because when I began the profession I started with the generally received idea that porrigo is incurable; but having had my hospital at one time filled with paupers drafted from three other workhouses, and among them having chanced to get a large proportion of children affected with porrigo, every one of whom had been under some kind of treatment or other; I instituted a series of experiments in order to test Dr. Neligan's mode of treatment, and satisfy my own mind. The result was as follows:—Of the children treated constitutionally, as he recommends, some recovered; whereas of those who were treated by local applications of the most varied kind, very few were even improved. But to return to my cases.

The father of these unfortunate children having made a bargain with the quack, sent them to his house on or about the 15th of April last, and whilst there, Mack rubbed into their heads a white ointment (which I subsequently learned from himself was made with two drachms of corrosive sublimate, and one ounce of tallow). If my applications had been painless, this made ample atonement for all my deficiencies; pain most agonizing at once set in, and before the doctor shoemaker had done *rubbing in* the second, the first was in torture, screaming that his head was on fire.

The operation being completed on both the children's heads, they returned home, and by the time they reached there, their sufferings were so intense that they could be heard screaming from every part of the village where they lived, and, in about *forty minutes* from the application of the ointment, they were completely delirious. Vomiting of green matter, to a large amount, also set in, together with pains in their bowels, diarrhœa, and bloody stools, all in less than three-quarters of an hour from the application of the ointment. Thus they continued from bad to worse, till death put an end to their sufferings, the youngest on the seventh day, and the eldest on the ninth day of their illness. During the whole of this time they had not one intermission, and from the moment they returned from Mack's to the hour of their death the screaming, the vomiting, and the purging never once ceased.

The youngest child having died, an inquest was held, and I was directed by the coroner to make a dissection of the body, which I did thirty-eight hours after death, and gave in my written opinion "that deceased had died from the effects of a mineral poison, probably a preparation of mercury or of arsenic."

These were the appearances I found:—Body well formed, and not at all emaciated; cadaveric rigidity well marked. On examining the head I found the scalp studded with round, depressed, circular ulcers of about one inch to an inch and a half in diameter, with fragments of dock leaves adhering to them; these being scraped off, the bottom of the ulcer presented a peculiar yellow tint, and on making an incision into it perpendicularly to the surface of the cranium, this yellow appearance was seen to penetrate the entire substance of the scalp; it was of firmer consistence than the adjoining sound pieces of skin, and felt under the knife like cutting through a piece of brawn. I removed the calvarium, and found nothing worthy to note except a peculiar dryness of the entire surface of the brain, which was also present in the ventricles and the spinal canal. The substance of the brain itself was firm and white, sprinkled with minute red points, but not in great number. On opening the abdomen I was again struck by the extreme dryness of all the peritoneal surface. The liver was large, but not extremely so, and its substance on section appeared normal; the gall bladder was distended with bile, contrary, I believe, to what has been generally stated to be the case in poisoning by corrosive sublimate. The intestines, as they lay in situ, appeared blotched with pink, purple, and brown spots, and a perfect mass of intus-susceptions,—I counted twenty-three. On opening the stomach, which was moderately distended, I found the mucous membrane injected with red blood throughout, presenting the most beautiful arborescent appearance, but not the smallest ulceration or softening. The duodenum was healthy, but the jejunum, ileum, colon, and rectum, were all in the highest state of inflammation, especially the lower third of the ileum, and the commencement of the colon, about the ileo-cœcal valve, which was not only inflamed, but studded with some small patches of ulceration, about the size of a pea.

The pancreas, kidneys, and spleen, were all healthy; the bladder empty, and contracted to the size of a chestnut.

While this examination was going on, the elder brother died. On the following day, sixteen hours after death, I made an examination of his body also, the details of which I need not give, as the appearances were exactly similar to those just described, with the following exceptions:—The gall bladder was empty and highly contracted; the urinary bladder quite full; the ulcerations of the intestines were also more extensive, and the stomach presented, in addition to the beautiful pink arborescence above described, some few black spots of extravasated blood.

I had seen this last child alive about two hours before he expired; his countenance was then expressive of extreme anxiety and pain; round his mouth, for the space of about an inch and a half, there was a rash, such as appears often in poisoning by arsenic; he was quite delirious, and died shortly after in convulsions.

The principal points of interest which appear to me to be worth noticing in the two foregoing cases are, first, the extreme rapidity with which all the severe symptoms set in. So far as I have been able to learn, from the very few cases of external poisoning by corrosive sublimate which are on record, pain has set in immediately in some of the cases; but vomiting and bloody stools have not commenced for hours and days. Now in the foregoing, although, for the sake of greater certainty, I have said that forty-five minutes elapsed between the inunction and the commencement of the bloody stools, yet I believe that I could reduce that interval to thirty or thirty-five minutes, as the children were attacked at once on reaching home, and the distance is easily walked in half an hour or less.

Another interesting feature was the total absence of ptyalism in both cases, and the appearance of cancrum oris in the youngest; whilst a rash very similar to that which occurs after arsenical poisoning appeared round the mouth of the eldest.

The eldest child passed water throughout his illness, although in diminished quantity, and his bladder was found full on dissection.

The youngest had complete suppression of urine from the commencement; and in him I found the urinary bladder empty and contracted, whilst the gall bladder was distended with bile, contrasting with the elder brother, in whom these conditions were reversed.

The following is the verdict, which was unanimously agreed to by twenty-three highly intelligent jurymen at the inquest; and before giving it I must premise that, in addition to the other evidence, the quack admitted that he had applied an ointment to these children's heads on the day they were taken ill:—"That deceased came by his death from the effects of a poisonous substance applied to his head for the cure of a disease of the scalp by a person or persons unknown to us."

Art. VIII.—*Remarks on the Removal by Operation of the Sequestrum in Necrosis; with Cases.* By John Hamilton, Surgeon to the Richmond Hospital.

Operations for the removal of the sequestrum in cases of necrosis have been seldom performed in Ireland, certainly much less frequently than in England or Scotland, if we may judge from the absence of recorded cases in the Irish medical periodicals. I am persuaded, nevertheless, that judicious surgical interference, in such cases, is most valuable, either in shortening the very tedious process of separation, or in removing a cause of irritation, under which the powers of the constitution are about to fail. A few examples will set this in a stronger light than any more lengthened observations.

The first case is one where the disease had not yet had time to produce injurious influence to any extent on the general health, and the operation cut short at once its further progress.

Case I.—*Necrosis of the Tibia; Removal of the Sequestra by Operation; Cure.*

John Rimmer, aged 14, a thin, but healthy-looking boy, lame of the left leg, admitted into No. 9 ward of the Richmond Hospital, October 21st, 1853. He came from Whitehaven, where his father was a poor fisherman. Eleven months since, after much exposure to cold during severe frosts, he became affected with dull aching pain in the left leg. His sufferings were rendered acute by the chafing of a hard, heavy clog which he wore; the leg became red and swollen, and burst in several places, which discharged pus, but no bone, and have continued open ever since.

The two lower thirds of the leg are the parts now engaged, the upper third looking nearly natural; the foot also is unaffected, and though there is some effusion in the ankle-joint, motion gives no pain.

The affected part of the leg is of a dull red colour, particularly in front. There are eight openings discharging yellow matter, some with raised flabby granulations round their orifices, others small, puckered, and depressed. The two lower thirds of the tibia are enlarged four or five times the natural size, the enlargement depending on a hollow case of new bone containing sequestra of the old dead bone within its cavity, which are readily felt by a probe passed through any of the eight openings. The sequestrum, though yielding to pressure, did not feel as movable as I should have wished. But a probe is not a good instrument to test the movability of the sequestra, as the yielding of the thin flexible silver probe is apt to give a false feel of motion; a steel director is much better.

November 23rd. He was put under the influence of chloroform, and I proceeded to try and remove the dead bone. An incision was made down the centre of the tibia, a little below the middle, where there were four openings or cloaca in a zigzag line, and where the probe most readily passed down to the sequestrum. It was made crucial by a transverse cut; the angular flaps were rapidly dissected up from the bone, which was rough. In the lowest and largest opening I passed the point of the curved bone forceps of Nelaton, but the new bony case was so hard it made scarcely any impression; so with Hey's saw I cut out a diamond-shaped piece of bone, the two pointed ends responding to the lowest hole, and to one an inch and a half above; it was prised up with the elevator and removed. The white, smooth surface of the sequestrum became at once quite apparent; I cut it in two with a cutting forceps, and removed readily the lower portion, an inch and a half long; but the upper portion resisted my most strenuous efforts, the forceps bringing away bits of the bone, but the bulk of the sequestrum, though movable, remained firmly wedged in. About three inches above there was a tolerably large fistulous opening; this I enlarged by a longitudinal incision, and, dissecting up the flaps of integument from the bone, I exposed a large cloaca, through which the finger could be readily passed and the sequestrum felt, and pressure on it pushed lower down the end of the sequestrum towards the inferior opening. After a great many trials, the greatest force having been exerted, and the sequestrum prised and loosened by the elevator, and one of the ends of a curved forceps, it began to yield to the traction, and a large piece of the shaft of the old bone, hollowed and destroyed at one side, smooth on the other, at least four inches long, was removed. There was free bleeding, but nothing like hemorrhage. After loose bits had been removed with the fingers, the bleeding cavities were filled up with shreds of lint, and simple dressing put firmly over it.

November 28th. Has done remarkably well; very little inflammation, and granulations are springing up from the hollow of the new bone and the sides of the incised bone; water runs freely down the canal of the new bone, from the upper, out at the lower opening. Improved in health and appetite.

February 10th. Has gone on steadily improving, the wounds filling up with large healthy granulations; scarcely any surrounding inflammation. To-day, however, he complained of irritation at the upper end of the tibia, and there was an increase in the discharge, and the edges of the opening looked greenish and unhealthy. Passing a probe, I found the cause to be a piece of dead bone, which, with some little difficulty, I removed; the piece was about two inches long, thin, and worn away. After this there was no further trouble, and on the 15th of March he left the hospital to return home, the only remains of the disease and of the operation being four small sores,—two quite superficial, and which will most probably be quite healed in a week; the other two lead a short way down into the remains of the former cavity in the bone, which is now nearly quite filled up. The discharge from all the openings in the twenty-four hours would scarcely amount to half an ounce of thick healthy pus. No sign of the smallest particle of diseased bone can be detected anywhere. The tibia is greatly reduced in size, the integument covering it pale, and no tenderness on pressure. He can walk about as well as ever, and his general health is excellent. I saw the captain some time after, who told me all the openings had healed, and that he was quite well.

If we consider the great tediousness of necrosis, and the many years this boy would have suffered from local pain and constitutional disturbance,—lame, sick, and idle,—the result of this operation, when the disease had only lasted eleven months, in shortening the period, and restoring the use of the limb, must be considered very satisfactory. In the next case the necrosis affected a more important bone, the largest in the body, surrounded by large and numerous muscles. It had lasted so long that lameness and great local deformity had ensued, and the integrity of a most important joint was in jeopardy. The constitution had become seriously injured by the existence, for so long a time, of a serious local irritation, and by the constant drain of matter and the frequent discharges of blood.

Case II.—*Necrosis of the Femur, cured by Removal of the Sequestra by Operation.*

J. Dempsey, aged 15, a pallid, depressed, anxious-looking boy, much too small for his age, admitted into the Richmond Hospital, November 3, 1853, with lameness of the left leg from necrosis of the femur. Between four and five years ago a pain and swelling came on the lower part of the left thigh, several abscesses formed, broke, and healed up again, leaving silvery cicatrices. One of these, depressed, puckered, and adherent to the bone, is seen on the inside, a hand's breadth from the knee. The only opening that still remains is one on the outside of the thigh, about the same distance from the knee. It is a circular, depressed hole, like an umbilicus, discharging profusely sometimes thick, sometimes thin, yellow matter, sometimes gushes of blood, which weaken him very much. A probe goes readily through this, and an opening in the bone into a hollow, where a large piece of dead bone can be felt. It appeared only slightly movable. The two lower thirds of the femur are increased in appearance four times the natural size, the bone itself forming the real bulk of this increase, for the muscles of the affected thigh are quite emaciated, while in the sound limb, on which the principal efforts of support and progression depend, they are fully developed. The thigh also looks much longer, which admeasurement proves it to be by about one inch and a half. The swelling is greatest at the centre, so as to give it rather a fusiform appearance; the surface of the bone very rough and uneven. It is tender on pressure, but not painful, and the integument is pale and shining. He has the peculiar pale, waxy colour of long-continued disease; his flesh has wasted, and he has diarrhœa; pulse 96; tongue red at the anterior half, with a white aptha on it, white fur at the back half.

By care in diet, and astringent tonics, he pulled up a little strength. The sequestrum remained unchanged, much less movable than I could have wished, and from the depth the probe had to pass through the cloaca before it touched it, I conjectured the new bony case to be of considerable thickness. But it was clear that there could be no longer delay in any operative proceeding The obstinately recurring diarrhœa, the swelled belly, the rapid, weak pulse, the emaciation, the languor, the perfectly pallid complexion, all pointed to the necessity of some speedy effort at relief, or it might be too late. The constitutional powers were evidently on the eve of yielding to the disease, after a continued contest of nearly five years.

December 7th. I proceeded to attempt the removal of the sequestrum. A semilunar incision was made on the outside of the femur, taking the cloaca as the centre of the cut, down to the bone, from which I dissected off the soft parts, which was not very easy, as they were matted together by inflammation, and firmly adherent to the bone. My plan was to remove two circles of bone by a small trephine at some little distance from the cloaca; there would then be three holes in the new bony case, and by sawing between them I could take away a triangular piece. This, however, proved to be a work of immense difficulty, the bony case was of such great thickness, from three quarters of an inch to an inch, its structure was also very close, like ivory, rendering it at once both hard and tough. The trephine, therefore, worked with extreme difficulty when it had gone a little depth. After nearly an hour's hard work I succeeded in removing a piece sufficiently large to let me get my forefinger into the cavity, the sequestrum could then be felt and moved about, but was evidently so large that the opening was not sufficient, but would require to be materially enlarged. As he had been so long under the influence of chloroform, and seemed a good deal exhausted, I thought it best to defer this probably tedious process to another day. There was a good discharge of matter from the opening, and for a short time after the operation, most likely from this cause, he rather improved, and the swelling seemed to lessen. The dead sequestrum, of a pale brownish colour, and smooth, could be seen through the wound. I sent him to the country for a few weeks.

February 8th. He returned yesterday, but not improved; on the contrary he was very pale, he had continued diarrhœa; the belly was swollen, and the pulse quick and feeble. There was clearly no time to lose; the constitution was again beginning to yield to the local disease. The only change in the last was that a fresh opening had formed at the inside of the thigh, about a hand's breadth from the knee. When he was fully under the influence of chloroform I proceeded pretty much as before, till the cloaca on the outside, and the bone around it, were fully exposed. I found the enlarged opening made by me at the former operation was filled up, except a moderate-sized hole in the centre, with a layer of soft lymph, readily broken up with the finger; the sequestrum was rougher than before, in consequence, no doubt, of absorption having begun on its surface. It appeared to me also more movable. I placed the crown of a trephine over the bone, about one-fourth of an inch above the upper end of the opening, intending to cut the two openings into one by the straight saw. As before, the difficulty of removing a piece with the trephine was excessive, from the almost ivory hardness of the bony case, and its great thickness. When I thought I must be near penetrating the cavity, I removed the trephine, and partly with Hey's saw, and partly with chisel and mallet, and with the elevator, I removed the intervening piece of bone, along with the circular trephined bit. The opening was now sufficiently large to ascertain the exact state of the sequestrum; though movable, it was not loose in its cavity. It was evidently large, extending below and considerably above the opening. The necessity became apparent of dividing it across. It could not be done with bone nippers, as there was not room enough for them to be expanded. I, therefore, used a thin metacarpal saw, very obliquely, and at the point: this answered well. The upper fragment was seized with a forceps and readily drawn out, but a most difficult matter was to extract the lower one, which seemed to be closely united by firm fleshy bonds of union to the inside of the new bony case; and as the traction was at a disadvantage, it required my whole force, and much moving to and fro, to detach the chief piece and get it away; several small portions were broken off before this was accomplished. The finger was passed in, and no more fragments discovered, the cavity being quite smooth, lined by a soft membrane. The operation lasted one hour and ten minutes, and the lad was under chloroform the greater part of the time. He was a good deal exhausted. The colliquative diarrhœa caused him to pass thin watery motions even on the operation table.

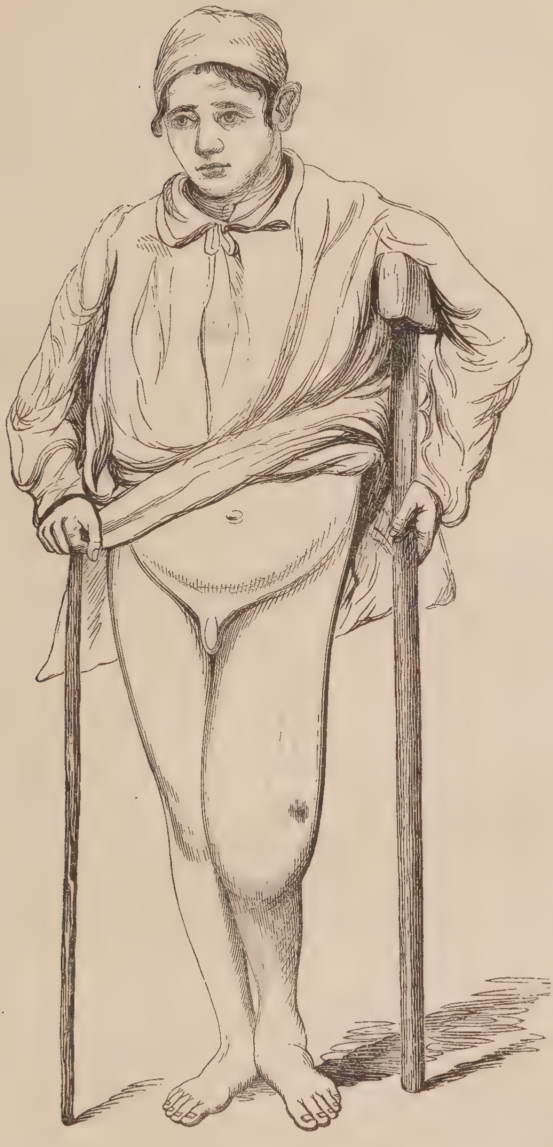
February 28th. The day after the operation the amendment commenced, the bowel complaint stopping without any more medicine. It afterwards recurred for a couple of days, which was found to be owing to the irritation of a good-sized piece of sequestrum having worked its way out through the wound into the poultice. After this he went on improving in health, strength, and appetite. A similar improvement has taken place in the femur, the large opening being now a granulating and rapidly contracting sore, the discharge healthy, and only moderate in quantity. An injection of tepid water was made once or twice into the cavity of the bone; it returned little altered. He feels no pain or uneasiness, and the bone is not sore on pressure as before. The thigh has diminished half an inch in circumference, and looks even less. As he could go to the country, I thought it the best and most likely means to hasten his recovery. Two months after, a most striking improvement was manifest; he walked about with scarce any lameness, and without a stick, and helped his father in many of the ordinary labours of his dairy,—milking cows, and driving a dairy cart.

June 24th. He came to see me to-day at the hospital. Quite well in bodily health; walking with scarcely any halt; the knee perfectly sound. The opening is not yet closed, but the discharge is trifling, and there is no pain or other inconvenience. The limb looks the size of the other.

Case III.—So hopeless an aspect did the following case present that I was inclined at first to leave it alone, doubting whether any operation would be justifiable. Hitherto the success has been most remarkable. Walter Farley, admitted into No. 1 ward, sixteen years of age, but very stunted in growth, with an anxious, wrinkled face, like that of an old man, of a pale, sallow colour; lame from necrosis of the left femur, and obliged to use crutches. There is enormous swelling of the left thigh; it appears to occupy the whole thigh; but the lower four-fifths of the femur are alone engaged, and it is white and tense, with blue veins meandering over the surface. The swelling can be felt to depend on general enlargement of the femur; the tumefaction of the bone being cylindrical, quite hard, and rather tender on pressure, most likely from periostitis. It exceeds the healthy thigh five inches in circumference; it is also considerably longer. The swelling terminates gradually above, and about a hand's breadth below the trochanter the bone feels natural. The greatest amount of swelling is below at the condyles. The knee joint is engaged, much swollen, and fluctuating from effused fluid, and the patella floating freely on pressure. It is kept slightly flexed, and cannot be straightened; but motion does not cause pain; the cartilages are, therefore, safe, not ulcerated. At the lower third of the thigh, externally, and a little posteriorly, there are two fistulous-looking openings, about three inches apart; they discharge an immense quantity of thin brownish pus, and very often large quantities of blood. On the inside are several silvery cicatrices where former openings had existed and closed; and about a hand's breadth above the internal condyle there is a circular soft spot, the size of a shilling, plainly a perforation in the new shell of the femur; and, what is curious, pressure gives a gurgling feel from the presence of air which escapes from the cavity of the bone, and gets under the soft parts over the hole. About five years ago this thigh was squeezed and bruised by a loaded asses' cart falling on him, the lower end of the femur having been hurt by the shaft. Pain followed, with swelling, which burst; the opening healed, but another came, and so one or other has continued discharging ever since. He says that several bits of bone came from the opening at the inside, now healed, and many from the outside; small, some half an inch long, irregular, much worn, with sharp ends to them. He feels very weak, and thinks he will lose his life from the discharge. He has occasionally bowel complaint and sweating at night. He is quite emaciated, and can scarcely stand or walk any time from debility. The belly is very large, contrasting with the wasted trunk and extremities; it is tense, and numbers of blue veins course all over it. There can be little doubt but that this state of the abdomen depends on mesenteric disease; but, besides that, the liver is greatly enlarged, filling up the epigastric and right hypochondriac region, and extending down to a line on a level with the umbilicus. There is, moreover, a small purple, fistulous opening at the right side of the chest, where there had been caries of the fourth rib, near the mamma; round this, for a short distance, percussion is dull, and respiration is feeble: he says that a few weeks since he had spitting of blood, but now has not any cough, nor are there any physical signs of phthisis. The annexed woodcut, after a drawing from the talented pencil of Mr. Conolly, will convey an idea of the appearance of this remarkable specimen of necrosis. I was very anxious to ascertain, as far as possible, the state of the sequestrum, if anything in the way of operation could be done for this most unpromising case. By a steel director passed into either opening, I came, after penetrating more than an inch, down on the sequestrum; it did not feel very loose,—most so at the upper part. Locally, there was no objection to operation; but the serious organic disease of the liver and mesenteric glands made me hesitate; it was clear, however, that he could not hold out much longer against the local irritation and profuse drain of matter and blood. I watched, therefore, with some interest, whether such an amendment would follow good diet and the arrest of the bowel complaint, as would justify me in operating for the removal of the sequestrum.

April 5th. He saw Dempsey, the boy already operated on, who came from the country to show himself, looking so well, that he became urgent that something should be done for himself; and, as he had certainly improved in appetite and strength, I felt that if anything were to be done it should be now, as another attack of bleeding, of which he had had two since admission, might, in his present precarious state, turn the chances against him.

Assisted by my colleagues, Professor Smith and Mr. Fleming, I proceeded to the operation, the boy having been first put fully under the influence of chloroform. I made a slightly curved incision down to the bone, between the two openings at the outside of the thigh, a hand's breadth above the knee. There was smart hemorrhage, chiefly venous, but as there was some also from several small arteries, I thought it best to apply the tourniquet, which I had hoped to do without. The soft



parts, including the periosteum, were much thickened and consolidated, and very adherent to the bone. My first intention was to make a straight cut with a saw between the two cloaca, and then two other cuts from them to meet at an angle, so as to remove a three-cornered piece of bone. But I found the bone so thick that this would be a tedious process; and feeling with my finger, in the lower cloaca, that the edges were rather thin, and likely to be readily cut with a bone nippers, I worked with them, and also with chisel and mallet, till I had removed bone enough to feel the sequestrum distinctly. It was large, and extended below to near the knee, and evidently high above; it went across the opening I had made,—smooth, white, thick, and firm, and appeared to be constituted by about two-thirds of the lamella of the bone. Lying at the bottom of rather a circumscribed cavity, the nippers could not act well; I, therefore, removed another portion of the bony case with a chisel and mallet, which gave me room enough to get to work with the straight, thin, metacarpal saw, but at a great disadvantage. I did cut through enough, however, to enable me to break it quite in two by a strong application of the cutting forceps. The lower portion was readily removed, but the larger upper one required more force, and was difficult enough to get out; by the removal of two other smaller detached bits of sequestrum the cavity of the bone was completely emptied. This cavity felt smooth and soft, and was lined by a villous and highly vascular membrane.

The chloroform prevented any suffering during the operation, which lasted three-quarters of an hour. It was not so difficult as Dempsey's, in consequence of the case of bone, though excessively thick, being more brittle, and yielding more readily to the chisel and mallet. As there was smart, deep-seated bleeding, I stuffed the hole in the bone with lint.

7th. Doing very well. I removed the lint, and the opening in the bone appeared large and clear, and the edges of the bone an inch thick. I washed out the interior with tepid water.

May 15th. He continued steadily to improve in strength and appetite; his colour began to change to a healthier hue, and, what was very encouraging, the liver rapidly to diminish in size, being two fingers' breadth above the level of the umbilicus, and the convexity less; the belly also fell considerably; and he went about the grounds of the hospital. The opening in the thigh threw out granulations from the bone at the sides, the discharge thicker and less, with no blood. The weather being suitable, I sent him to the sea-side for a month; on the 26th, eleven days after, I got a letter from him saying: "I am happy in letting you know that I am getting better, and find the country agreeing well with me; my thigh is much reduced, and coming to its natural shape and colour."

July 1st. I got a letter from him, in which he mentions his further improvement in health and strength, and that he is coming to town shortly to see me.

In performing operations in necrosis we must be prepared for many and unexpected difficulties. We cannot tell exactly, particularly when the femur is the seat of the disease, what thickness of bone we have to contend with, nor what will be the consistence of the new osseous material. If we examine dry preparations we find the walls of the new bony case to be exceedingly rough, largely granular or tubercular-looking on the outside, of very unequal thickness; and in operating on the living the cellular structure of the new bone, in some instances, is so open that it is comparatively soft and friable, and will yield to the cutting forceps or saw readily enough; in other cases, in Dempsey's for instance, the close texture and ivory hardness of the bone, conjoined with its great thickness, become serious elements in the difficulties of the operation. We consequently have to vary our instruments. What yields slowly and reluctantly to the saw or trephine will sometimes fly before the chisel and mallet. I have been rather disappointed with the cutting forceps.

The selection of the spot, where we may remove enough of the bony case to get readily at the sequestrum, requires some consideration. As a general rule, the best place is undoubtedly the existing opening or cloaca. These cloaca are sometimes round and small, but oftener large, irregular, and with the edges thinned at one side or another; the wall, therefore, being thinner here, not universally, but very frequently, we have better chance of more readily dividing the bone. It will, also, not uncommonly be found, that when the integuments have been dissected up, the cloaca is much larger than the external fistulous opening would have led one to expect. A very little further enlargement, therefore, would be sufficient, or even none may be necessary, as in the upper opening in Rimmer's case. For both these reasons the original cloaca may be selected as the centre of our incision; and where two are close together they may very advantageously be run into one[a]. These holes, too, will oftenest be found in situations the most convenient, and least dangerous for dividing the soft parts,—in the thigh, at the outside of the lower third; in the tibia, on its front and inner aspect, where little more than integument covers the bone.

With regard to the sequestrum, the first point should be to ascertain the extent of its movability. I refused operating in a case of necrosis of the femur of long standing, a short time since, because I found the sequestrum immovable. We should be assured by careful examination with the steel director that it has become separate and fairly loose previous to operation; even when its free motion has been clearly recognised, yet when we come actually to attempt its removal, we will often be surprised at the extreme difficulty of effecting it. Now the difficulty may arise from several causes. The sharp irregular ends of the sequestrum may be dovetailed in corresponding depressions at the articular ends of the new bony case; this is observable in several pathological specimens; or granulations may grow into and through the inequalities and holes in the sequestrum; this, though a soft fleshy resistance, still requires considerable traction to overcome; there is a good plate of it in Mr. Stanley's work. Another cause I believe to be atmospheric pressure, the smooth round external surface of the sequestrum being in perfectly close contact with the inside of the new bone; this may coexist with free up and down motion, the sequestrum sliding in these directions like the pieces of a telescope, while to lift it from its lateral junction requires great force. It is sometimes very important that we should avoid the application of force at an angle with the axis of the bone, but keep the traction of the sequestrum carefully in the line of the limb, for in some cases of necrosis the new bony case—instead of being firm, compact, and granular, has its wall so riddled with large and small irregular openings, with large gaps in which no bone has been secreted—is so thin and frail that if lateral force were applied to any extent, in prising out the sequestrum, a large portion of the shell would be broken off, or the whole substance of the bone snapped across. When the sequestrum happens to be long, tolerably strong, and unbroken, it cannot be got out entire even through a large opening; we must therefore divide it, and this is best done with the saw. From its depth and the projecting edges of the opening getting in the way, it is next to impossible to saw it straight across—it must be done very obliquely, and with the point of the metacarpal saw. In the Museum of the College of Surgeons is an interesting preparation in which a large firm sequestrum of the tibia is marked by two transverse saw cuts, which had only penetrated about one-third, the projecting edges of the long cloaca having impeded the further progress of the saw; whereas, had it been applied very obliquely, the bone could have been completely sawn through, as there is plenty of room for it to have so acted. I dare say in some cases the chain saw might be advantageously used; in those I have seen it could not have been got between the dead and living bone. It is not necessary to saw quite through; after a certain extent is divided it can be finished by the elevator or the cutting forceps. A careful search should always be made after small bits; it is not very easy sometimes to get at them all, but if left they always cause trouble.

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[a] There is a plate in the Musée Dupuytren showing a necrosed femur, where numerous trephine cuts had been made in the bony case in an ineffectual effort to get out the sequestrum. These openings had been made at some distance from the cloaca where the bone was very thick, at least two or three times as thick as at the edge of the cloaca.

After the sequestra are all removed, the amendment is usually very striking and very rapid, but we must not expect the closing of the aperture we have made to be equally speedy, indeed it would not be desirable. The large cavity that held the sequestrum must have time to fill up; it certainly does diminish very quickly, as the altered size of the limb both in appearance and by actual measurement shows, but till the hollow is filled up the discharge will keep the hole open. The constitution, so long accustomed to a large and continuous drain of matter, is by this gradual process of cure saved from the injurious effects of sudden stoppage.

It is remarkable how soon the limb regains its former use and the joint its integrity. If we consider, therefore, that we shorten a very tedious disease, and that we arrest in many cases the certain death that would otherwise result, we may feel full confidence in resorting to the operation. There is, moreover, a mechanical danger which has been little alluded to by authors, and is yet of a most serious kind. It is when the sharp end of the sequestrum protruding from one of the cloaca wounds a large bloodvessel. I have seen two fatal cases where the popliteal artery was thus opened :—one published by Mr. Porter in a former number of this Journal, where the cloaca was in the lower end of the femur posteriorly, and a sharp sequestrum pierced the popliteal artery, and the man bled to death. Another I saw with my friend Dr. Gabriel Stokes, of Mullingar:

a young man bleached to the last degree, and with the haggard expression of hemorrhage. He had laboured under necrosis of the left thigh bone for twelve years; many abscesses had formed and broken, and discharged yellow matter; these had left five openings, one internal, two external, and two in the popliteal space, all a short distance above the knee; the one on the inside was as large as a shilling, with livid, projecting granulations; the three lower fourths of the thigh were greatly swollen. From all the openings every now and then profuse hemorrhage would take place. While applying a warm stupe a week since, blood suddenly gushed out in a full stream from the large opening. He was evidently sinking fast, the pulse weak, rapid, and dicrotous; he would allow nothing to be done. He died three days after, rapid gangrene having seized the leg.

Art. IX.—*On Death by Hanging, with an Account of the Execution of a Murderer, and the subsequent Examination of the Body.* By Charles Croker King, M. D., M. R. I. A., F. R. C. S. I., Professor of Anatomy and Physiology, Queen's College, Galway, and Examiner in the Queen's University in Ireland, &c., &c.

An individual having been found dead, and suspended by the neck, a medico-legal question has frequently arisen, as to whether the suspension of the body took place previous to or subsequent to death; and the determination of this point may constitute the important difference between an act of suicide or the perpetration of a murder. Suspicion might fall upon an individual known to be interested in the death of the deceased. The body may have been found under circumstances rendering self-destruction improbable; collateral circumstances may have strengthened suspicion, already strong against the accused; and at last the evidence may be so nicely balanced that the slightest additional testimony would be capable of turning the beam of justice in either direction.

A fearful responsibility might thus devolve upon the medical witness; his opinion would, of necessity, carry considerable weight, and he might be asked this important question, Could this individual have died by his own hands? Life or death may hang upon the answer; if it be erroneous, the guilty may escape from merited punishment; or, what is of still greater moment, and fearful to contemplate, an innocent life may be sacrificed, and the earthly prospects of an entire family unjustly blasted. Considerations of this kind have induced me to lay before the profession the result of a careful examination of the body of a malefactor whose execution I lately witnessed.

The circumstances attending the murder may not be without interest to some of my readers. Last summer a young girl, who had been sent on a message to a distance of five or six miles, was found barbarously murdered at the margin of Dunsandle Wood. A deep wound in the throat appeared to have been the immediate cause of death. Suspicion fell upon a person of the name of Hurley; he had been a fellow-servant of the girl; he had been seen on the day of the murder in the vicinity of the place where the body was found, walking (apparently upon friendly terms) with the deceased.

Hurley's previous character was of an unsatisfactory nature: he never engaged in any regular occupation, but, on the contrary, led rather a wandering life, obtaining a livelihood as a messenger, and but seldom having or wishing for continuous employment; he was twenty-two years of age, about five feet seven inches in height, and weighed ten and a half stone, muscular, and athletic. Having been arrested, he contrived to effect his escape, which he accomplished by daring acts of agility. A large reward was offered for his apprehension, but for some weeks he contrived to elude justice; at last, worn out by fatigue and constant watching, he was apprehended while asleep in the open air. The evidence adduced at the trial, on the part of the Crown, established the culprit's guilt beyond reasonable doubt; he was consequently found guilty, and the 27th of August was fixed for his execution. The prisoner, upon being sentenced, declared his innocence, and cried for vengeance upon both judge and jury, either in this world, or in that to come.

On Saturday, the 27th of August, 1853, at twenty-five minutes past 6 o'clock in the evening, the extreme penalty of the law was carried into effect; the execution had been delayed by the under-sheriff until this late hour from humane motives; the arrival of a reprieve by the late mail (though not to be expected) was within the reach of possibility.

A special messenger having returned from the train, hope was at an end, and the melancholy procession from the chapel to the place of execution formed. The culprit maintained considerable fortitude, but the frequent drawn, deep inspirations, and faltering steps, bespoke the sufferings of the inward man. It was a beautiful autumnal evening; the sun, as if in mockery of the solemn scene, danced upon the adjoining river, and illuminated a dense crowd of human beings, principally women and children, congregated to witness the dying struggles of a fellow creature. Their conduct, upon the whole, was not indecorous, but they evidently regarded the scene as a serious *amusement.*

It is not my intention at present to discuss the propriety of *public* executions; I shall content myself by mentioning a fact which has a tendency to support the views of those who doubt the value of such exhibitions as terrible examples, calculated to deter others from the commission of crime; it is as follows. The excellent and humane governor of the county gaol mentioned to me that, some years ago, a convicted criminal admitted to him, that he had witnessed every execution that had taken place for years in front of the very gaol in which he was at that time confined. We learn from this circumstance, at all events, that in this particular case the examples fell valueless, for this man lay under sentence of death for murder.

The criminal, having been placed on the drop, in a firm voice acknowledged his guilt, the justice of the sentence, and expressed regret for the language he had used towards the judge and jury. The fatal bolt was withdrawn, and he fell through a space of seven feet and a half. The rope used was ten lines in diameter; the knot was large, formed of three turns of the rope; and on the noose being tightened by the executioner corresponded to the occipital protuberance. The body fell with a tremendous jerk, and oscillated for a few minutes; the arms and legs became rigid; the forearms flexed on the arms, the fingers flexed into the palms of the hands, and the thighs abducted and slightly drawn up towards the abdomen; the sternomastoid muscles were affected with spasms, and the hands became livid. After a short time the limbs relaxed; the legs approached each other, the toes pointing downwards; the hands became pale, fell down by the side, and the fingers became relaxed. The body, having been suspended for forty-five minutes, was cut down, and the cord removed from the neck.

There was *not* any protrusion, or unnatural suffusion of the eyes; the upper and lower teeth were half an inch apart, and the tongue was indented by them, the lips were rather livid, and the face *pale*; a *slight* depression marked the position of the rope; there was not any discoloration of the integuments of the neck, breast, or shoulders; the thumbs and fingers were flaccid; the ring and little fingers were flexed into the palms of the hands, but could be easily extended; the cap in which the head had been enveloped was slightly stained by bloody mucus, which had flowed from the mouth and nose; the bladder was empty, the criminal having made water a few minutes before his execution; the penis appeared as if it had been recently erect; it lay upwards against the abdomen, and a thin transparent fluid had stained the shirt; this fluid being thin and transparent, its source was suggested as the prostate gland; however, I removed a drop between two portions of glass, and on placing it in the field of a microscope, numerous spermatozoa were detected. No further examination of the body could be made this evening, but in the morning, eighteen hours after death, the body in the interim having *lain on its back*, the following additional observations were made:—Cadaveric stiffening of the body; lividity of the face; lips and ears purple, integuments of the shoulders and of the upper and *front* part of the chest, now livid; the site of the rope was *scarcely perceptible*; and, if attention were not particularly directed to it, it would in all probability escape observation; in one place, for about the extent of a quarter of an inch, there was a *slight* parchment discoloration of the skin. An incision was made one inch above, and a second one inch below, the former position of the rope, and the integuments were raised with great care; there was not the *slightest* extravasation of blood, nor did the areolar tissue present any peculiar silvery or white appearance; the thyroid cartilage was, perhaps, slightly flattened, but not broken; none of the bloodvessels or muscles were injured in the slightest degree (the lining membrane of the carotids was carefully examined); the mucous membrane of the larynx was of a bright red colour; both the tongue and brain were in a high state of congestion,—the ventricles of the latter contained about two ounces of serum; the posterior inferior lobes of the lungs were also congested; the right cavities of the heart were full of dark-coloured fluid blood; the left side of the heart was empty; there was no dislocation or fracture of the vertebral column, or injury of the ligaments or of the spinal cord.

From an attentive perusal of the post-mortem examination, above detailed, it will be evident that, in this particular case, there was a singular absence of those appearances generally regarded as necessary accompaniments of hanging during life; and the case reaches its maximum interest in legal medicine when we consider that, in this instance, death from hanging had occurred in its *most violent form*, and still was unattended even with those slight evidences which are enumerated by many authors as constant attendants upon death the result of simple suspension.

It need not, I think, be regarded as a fanciful conception, to imagine the possibility of a case occurring in which, if death were suicidal, the body must have fallen from a height; and if those appearances, which might be expected to be of necessity present, were, as in the above case, completely absent, an erroneous conclusion might be arrived at. I, therefore, place this case of violent death, that was witnessed, and about which there can be no possible mistake, on record, in order that a disproportionate value may not be placed on negative results in cases involved in much obscurity.

In conclusion, I would say a word or two on the configuration of this man's head in connexion with the system of phrenology[a]. The organs denominated "benevolence," "love of approbation," "concentrativeness," and "adhesiveness," were all well developed. If phrenology be true, benevolence should have deterred this man from imbruing his hands in blood. Death upon the scaffold ill accords with love of approbation. Concentrativeness should have attached him to some locality, whereas he was a notorious wanderer. The organ of "alimentiveness" was small, notwithstanding which, from the day of his committal until the hour of his execution, he constantly applied for an increased quantity and an improved quality of food. The organs of "destructiveness," "adhesiveness," and "acquisitiveness," were exceedingly small in their development, and, nevertheless, for the sake of a few pounds (of which he robbed his victim) he deliberately planned and perpetrated the murder of an innocent, unoffending girl, his friend and former fellow-servant.

I am well aware how difficult it is to produce any facts, no matter how apparently opposed to the system of phrenology, that its supporters will not endeavour to reconcile to their peculiar views. So carefully do they shelter themselves by such ingenious evasions as peculiarities of temperament, increased and diminished energy, and compensating action of organs, &c., &c., but by such subterfuges they abandon the fundamental principle of phrenology, which makes size the measure of power.

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[a] The cranium was measured with a pair of phrenological callipers, and the development of the organs compared with a collection of crania in the Anatomical Museum, by which means the absolute as well as the relative size of the organs was obtained.

In these observations I do not wish to be understood as undervaluing general cranial development; I recognise the *brain* as the seat of intellect, and consider that an imperfect development of it is incompatible with high mental acquirements; but such a view is perfectly distinct from the theory of the *localization of organs,*—from the mapping out of the head into distinct compartments, and assigning to each place a particular mental quality.

ART. X.—*Percussor Stethoscope.* By B. WILLS RICHARDSON, F. R. C. S. I.

IN the twenty-sixth volume of the Dublin Medical Press, 1851, page 382, I described a form of stethoscope which admitted of being used as a substitute for Dr. Winterich's copper hammer. I considered that an instrument combining both the stethoscope and percussor in one, might be received with favour[a].

The description was not accompanied by an illustration; but as this form of instrument was subsequently approved of and adopted by some of our most practised stethoscopists, I have been induced to publish the annexed drawing of it.

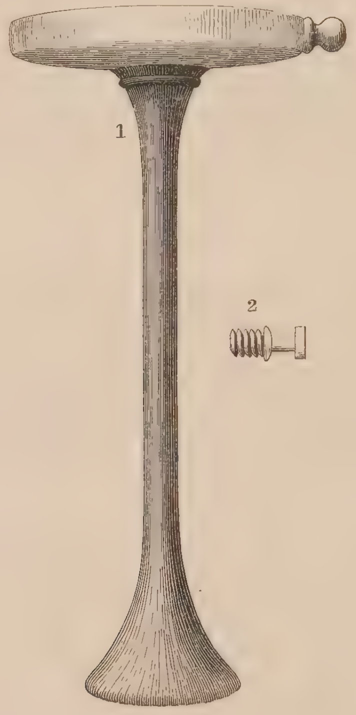
The ear-piece, I am now of opinion, should be made of ivory, from about two-eighths to three-eighths of an inch thick. Into its outer edge a small nipple of the same material, and similar in form and size to Fig. 2, should be screwed and properly cemented. A piece of vulcanized Indian-rubber, of about an eighth of an inch in thickness, and of the same diameter as that of the percussing end of the nipple, should next be glued to this end, and then another piece be drawn tightly over the nipple, and tied securely round its neck. Fig. 1 shows the instrument complete.

Some makers, instead of the nipple, have substituted that part of Dr. Winterich's hammer which contains the Indian-rubber; but I prefer the former, as it may be used with either the pleximeter or naked finger.

It is almost superfluous to say, that the stethoscope should

[a] Sir Henry Marsh was the first to introduce a stethoscope with this combination. His instrument consists of an ear-piece grooved on its outer edge, into which there is inserted a solid vulcanized India-rubber ring; the shank is made of wood.

be well made; for if the percussing parts are not firmly put together there will be a rattle when it is used.



The shank may be formed of wood.

Mr. Read, of Parliament-street, made the instrument from which the engraving is taken.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

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Fifteenth Report of the Ophthalmic Hospital of the Medical Missionary Society, at Canton, for the years 1848 *and* 1849. By the Rev. P. Parker, M. D. Canton: 1850. Pamphlet, pp. 39.

General Report of the Hospital at Kum-le-fau, in Canton, from April, 1848, *to November*, 1849. By B. Hobson, M. B., Canton, 1850. Pamphlet, pp. 51.

Third, Fourth, Fifth, and Sixth Reports of the Chinese Hospital at Shanghae, for the years 1849, 1850, 1851, *and* 1852. W. Lockhart, Esq., Medical Officer. Printed at Shanghae.

It is interesting, and at the same time instructive, to occasionally direct attention to the condition of medicine and surgery in regions far remote. On referring to our Exchange List, it will be perceived that we are in receipt of such of the foreign journals as possess sufficient professional character to render them desirable or worthy acquisitions to our periodical literature. From their pages we continuously afford to our readers intelligence respecting the exertions of their fellow-labourers in the cause of science, and not unfrequently extract therefrom many new and valuable facts. We are thus kept fully informed of the progress of our knowledge; and in that friendly co-operation which is wedded to philosophy, forgetful of all national differences or political animosities, join hands together to promote the general good. Wherever British medicine is practically known, some exponent of its presence, or some testimonial to its usefulness, is sure to arise, since its vitality rests in the universality of its application; while its greatness is identified with the freedom of its exposition. Deriving knowledge from every available source, the British physician is thus enabled to generalize from the experience of others as well as from his own; and, in the propounding of just principles, to fit the mind of the student for the reception of practical truths. Analogical reasoning acts as his pioneer in new and strange countries. Habituated to observe, with a mind keenly alive to the realities of nature, and fully prepared for the appreciation of disease in its Protean forms, it thence follows, that those obstacles which beset his acquisition of local experience become divested of much of their obscurity; and suffering humanity, whether beneath a burning sun, or amid the boundless snow, finds in his hands medical science is adequate to overcome those difficulties which clime, habit, and association, may present. Medicine reflects her glory while she deputes her power. The persons of her disciples come to be regarded in a light almost sacred, as those antipathies which credulity had engendered and ignorance matured are forgotten in gratitude for benefits conferred, or abandoned in blind deference to the practical testimony of the advantages she bestows.

High and exalted above the ordinary offices of man is the practice of the healing art. It speaks of comfort to the suffering—of pain to be removed—of deformity to be rectified—of sickness to be relieved. Whispering hope, while offering sympathy to all who require her aid, the substantial good conferred becomes truthful evidence of the reality afforded, which can neither be overlooked nor misunderstood. For, though human language may differ, and national customs vary, Nature re-echoes in the breast of all that universal voice which dictates thankfulness for benefits received, and thereby secures access to the intelligence through the avenues of the heart.

The extraordinary ignorance respecting the healing art known to prevail in "The Celestial Empire" argued the establishment of medical missions as amongst the most promising of the means by which to attempt the reformation of the moral and social condition of its inhabitants: accordingly, in the year 1838, they were founded at Canton, Hong-Kong, and Shanghae, and we are now in a measure furnished with evidence of the success which has attended on their labours.

Whatever difference of opinion may exist as to the advisability of conjoining medical and clerical missions, there can be none respecting the good results to which they have led. Yet it must not be supposed the physical weakness or suffering of human nature was, amongst the Chinese, thereby made the instrument of their spiritual coercion; or that the listening to the Word of Truth was, of necessity, incumbent on those receiving professional aid; for it is stated in the Report of Dr. Hobson, " while he had endeavoured to make the hospital an efficient auxiliary in spreading the knowledge of Christianity among its inmates, that this is not forced upon them, for it is a voluntary act for them to attend the religious services which are held in the lecture-room every day." As a consequence, we read, " though, when the institution was first opened for the admission of in-patients, there was some reluctance and timidity in accepting the offer, yet latterly, since the character of the hospital has become established, its regulations known, and its advantages understood, there is not only a willingness, but a solicitude, on the part of many to reside within its wards."

We shall, before proceeding to the immediate object of our review, offer to our readers a few and necessarily imperfect observations respecting the condition of Chinese as contrasted with British medicine. In this we have been in a measure anticipated by our zealous contributor, Dr. Churchill, to whose ardour for the advancement of our knowledge the pages of this Journal are already indebted for two highly interesting communications on this subject[a].

It will scarcely be credited, that a nation whose antiquity dates far before that of all existing states; whose inhabitants have been computed at one-third of the population of the universe; whose produce has extended to every part of the world; with whom the compass, paper, printing, and gunpowder, were for centuries in use, whilst to Europe they were unknown; from whom such valuable porcelain, lacquer ware, and silks, are derived; whose extraordinary perfection in many manufactures requiring both ability and skill,—all are familiar with, should, in medical science, have made little or no advance beyond those unfounded conceits, contradictory notions, and pompous phrases, which mark the earlier periods of infidelity and superstition. A secluded, they have remained an ignorant nation, and hence has originated a self-complacency, filling them with the conceit that they cannot be better than they are; rendering them blindly submissive to that hereditary folly which has, amongst other absurdities, perpetuated through centuries the maiming of their females and the disfiguring of their males,—practices which, though admittedly outrageous and inconvenient, known to have originated in the licentiousness of their prince Le-yuh, and the tyranny of their Tartar conquerors, still find, in the deformed foot and long tail, almost universal adherents.

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[a] A Treatise on Midwifery: a new edition, published in the fifth year of Taou Kwong; A Short Treatise on the Preservation of Infants by Inoculation: both translated by Dr. Lockhart: Dublin Medical Journal, First Series, vols. xx. and xxiii., communicated by Dr. Churchill.

It might be presumed that this non-progression of medicine was due to the salubrity of the climate, or to the healthfulness and social excellence of the inhabitants—that a comparative freedom from other sicknesses than those demanding the simplest remedies had engendered a certain degree of apathy for scientific investigations, whose practical utility there was no opportunity to test. All writers, however, agree in drawing quite a different picture, and in declaring that the national and individual habits of this peculiar people eventuate in the most loathsome and death-bringing diseases. Amongst the general mass of the population, ablutions of any kind are almost unknown: their residences abound with filth, their cities being devoid of sewerage; their pasture lands, in a state of perpetual irrigation and manure, become at seasons so many vast plains, from which the most noxious miasma arises, and are at all times unfailing sources by which scrofula, ophthalmia, cutaneous affections, remittent, intermittent, and typhus fever, with dysentery, are endemically perpetuated. Yet, with this aggregation of suffering, we are assured, " the ignorance of the people, whatever their class, amounts to utter childishness in all things not relating directly to the means of sustenance or sensuality;" and we have every reason to believe that a knowledge of medicine, and its application to the nature and treatment of disease, was probably as perfect among them at the time of Pythagoras as now. Nay, more, there is reason to infer, that it had reached the state in which it now remains at a much earlier period. Neither retrograding nor advancing, not profiting by observing the superiority of strangers, nor gaining wisdom by the futility of the means they employ, or the doctrines they hold,—the Chinese, to use the words of Dr. Wilson, " thus exhibit a great intellectual phenomenon."

According to the mythology of the Chinese sages, there are five elemental matters, fire, water, earth, metal, and wood, from which all substantial things, including the human body, are made by the operation of the active or the passive, or the union of the productive with the reproductive principle. As these elements are proportioned, so is the ratio of health or variety of temperament. From the element of fire are formed the ten noble organs; what these organs are, none but the initiated know. Water is held to be the direct source of the fluids generally, and the fountain from which the spirit is derived. The alimentary apparatus is formed from the element of earth. Bones are produced from metal. Of wood are constructed the five ducts, of which the rectum and urethra constitute two; other two are supposed to be the hepatic and pancreatic outlets, with perhaps the imputed one of the spleen. To such a physiology they have added a fully worthy anatomy, being indebted for both to imagination, since to dissection of the body for the purpose of learning the mechanism of the various parts, Dr. Wilson assures us they never resort. There are four authorized plates of the human body, which indicate their whimsical notions of its conformation ; three of these plates are devoted to the circulating systems, the other to the cerebral, pectoral, abdominal, and pelvic organs. The brain is depicted as occupying a small and central portion of the cranium; observation has, however, been so far effectual, that they represent their sages and warriors with great development of these parts, alleged to be the especial instruments of the intellectual powers and moral affections. The forehead is the door through which 360 nerves proceed, but where they go to, or what they do, has remained a profound secret. The heart is figured low in the thorax; it is considered a single cavity, the reservoir of good things: from above, the windpipe passes directly into it, while from below, a second or elective stomach communicates with it by a tube, which enters it above nearly at the same point as the windpipe. They are thus spared every difficulty in determining anything. One vessel proceeds also from the heart to the liver, and another descends along the course of the spine; after communicating by a broad reservoir-like expansion with the kidneys, it is presumed to terminate in the genitals. The arteries are said to be male and female, and each have their separate uses. The pulse artery extends one inch, or three fingers, placed side by side on the right or left wrists; it is divided into three parts:—first, called *tsün ;* second, *kwan ;* third, *chih.* There are four kinds of pulse:—first, *fan*, the strong full pulse ; second, *chin*, deep, feeble, small pulse; third, *che*, the slow pulse; fourth, *sŏh*, the quick pulse. The three places of the inch pulse may each have a different pulse. The *kwan* may be *fan ;* the *tsün* may be *sŏh ;* the *chih* may be *chin.* Besides these, there are other varieties of pulse:—the *chih* on the left inch pulse when hung (i. e. rising and swelling like a flood) in a woman shows that the child in the womb is of the male sex; when the *chih* is hung in the right wrist, the fœtus belongs to the female sex!

With such an accurate knowledge to guide, we cannot wonder that surgery, in the proper sense of the term, may be said to have no existence. Their surgical instruments, we learn, consist of a strange number of rough tools, more resembling the collection of a cobbler than the apparatus of a surgeon. In such a state of things it must be obvious that any efficient practitioner would speedily become an object of unusual interest, and a powerful means of gaining access to the good-will and confidence of the inhabitants, who, judging of those visible benefits which they could each understand, might argue favourably of those greater truths of which they had, as it were, received a convincing guarantee.

Amongst the most prevalent disease in China we may class ophthalmia. In the absence of the dazzling light, or flying sand, to which it has generally been ascribed at the onset, in Egypt and elsewhere, may we not infer that it proceeds from the continued miasma which is present?—a cause that, we doubt not, was mainly instrumental in originating and extending the fearful ravages of this affection amongst the debilitated poor in the over-crowded workhouses of the southern and western unions in this country towards the close of the famine years.

The fifteenth Report of the Ophthalmic Hospital at Canton, being for the year 1848, furnishes us with many interesting details of unusual examples of disease, for though this institution is principally intended for diseases of the eye, it is generally available. The whole number of patients treated up to 31st December, 1849, was 34,598; of whom 3663 were received in 1848, and 4341 in 1849. A table of diseases is added to the Report, and a selection of some of the cases given in detail. A few of these we shall notice. The first is headed "Escape of an intestinal worm from the side, and perfect recovery." The patient (a female) had a sore suddenly occur upon the abdomen, hard as a nut, without redness or tumefaction. At the expiration of a year, the physician of the village saw her, and examined her pulse; he applied medicinal plasters, and the skin and flesh were altogether destroyed, even to exposing the bone (the ilium), so that the disease was rendered nearly incurable. The patient became aware of the skilful hand of Dr. Parker, the medical missionary in charge, and applied for relief: when seen, "the skin and cellular tissue over the left iliac region, for a space of six or eight inches in diameter, had sloughed away, leaving the muscles and the spine of the ilium exposed; extensive ulceration and sloughing had also taken place along the spine; at one point, about midway in a line drawn from the umbilicus to the crest of the ilium, the abdominal muscles were perforated by the disease, and an artificial anus formed." The patient was for some time under treatment, and returned home with the local sore almost removed. One month afterwards, a worm, ten inches in length, came out of the mouth of the ulcer, which shortly afterwards healed. The report of this case is regarded by the author as bearing out the observations of Frank, Cloquet, and Stokes, that the intestinal canal may be perforated by worms, or an ulcerative process be established in the intestines, through which the worms may escape. Several cases of lithotomy are next given, in one of which the lateral operation was performed, and a calculus extracted, of a pyramidal form; the base towards the perineum, about two inches of the apex being within the neck of the bladder. It weighed 6¼ ounces; its circumference horizontally was 7½ inches, and vertically 10 inches; its corresponding diameters were 3 and 4 inches. This calculus consisted chiefly of the triple phosphates, and had been ten years in course of formation. From another patient, aged 40, a butcher by trade, of corpulent habit, a large lithic acid calculus was successfully extracted. It measured 7 inches in its largest, and 4¾ inches in its least circumference. It weighed 2 ounces, 2 drachms, and 1 scruple, and was removed whole. Under the section "Tumours and other morbid growths," we have a large number of cases given, in which tumours of an extraordinary magnitude were treated. We particularize a few. No. 27,231. Hypertrophy of both breasts, of ten years' growth, the left of which, measuring 2½ feet in circumference and weighing 6 lbs., was removed without difficulty, in three minutes and a half. In one month after, the right breast, measuring 2 feet and weighing 5½ lbs., was also operated on with equal success. A case of lipoma of both cheeks, in which the morbid growths at either side were of the same size, and each about 10 inches in circumference, is next given. This patient suffered no inconvenience, except from their weight; they were excised with facility. We may also mention a tumour, 1 foot in circumference, surrounding the middle finger, removed by disarticulation at the metacarpal joints. We regret we cannot enter more minutely into an analysis of these cases, or of the fractures, dislocations, &c.; yet we cannot avoid offering our tribute of praise to Dr. Parker for the singular ability displayed in his treatment, and the marked success which has attended his efforts. In most operations chloroform was employed, and we learn that "no unfavourable consequences have followed."

We shall next direct attention to a general Report of the hospital at Kum-le-fau in Canton, in charge of Dr. Hobson: from which we derive much interesting information respecting the condition of medical knowledge among the natives. The number of patients here treated averages that of the last Report. Insanity is stated to prevail to a much less extent in China than in Europe—a fortunate circumstance, since lunatic asylums are unknown. "The Golden Mirror of Medical Practice," a standard work in China, contains a very meagre description of the symptoms, cause, and treatment of this disease. Idiocy is properly distinguished from lunacy, and this latter is divided into two kinds, *kwang* and *tien ;* the first (*mania*) belongs to the *yang* principle, with an excess of fire or excitement; the second (*dementia*) partakes of the *yui*, with fluidity in excess, a state of depression. Several congenital idiots have been brought for treatment, but during eight years of practice Dr. Hobson met with but two cases of insanity. They were both men, about forty years of age. One was chained by his foot and hand to a large block of granite, and his wife and mother were in the greatest terror when it was proposed that he should be unloosed for a time, though the chains were galling his flesh. No benefit followed treatment in this case. The second, an example of mild mania, was restored to sound health. In his remarks on tumours, Dr. Hobson has the following observation, which, as it differs from the views generally entertained, and also from the opinion the Report of the hospital at Canton would favour, we quote at length:—

> "I have no statistical tables to guide me, but I much doubt whether the opinion commonly expressed is a correct one, that Asiatics are peculiarly the subjects of unnatural enlargements and large growths. In the West, tumours are removed by operation almost as soon as they appear, and are never heard of; still, a large number come under the care of hospital surgeons, and are reported in the medical archives. In the East,—I speak more particularly of China,—the excision of tumours by the knife of the native practitioner is scarcely, if ever, practised; I have never heard of a single case. The consequence is, that tumours go on increasing both in number and size from year to year, and from their position and unnatural proportions excite attention, and produce the conviction of their greater frequency among this people."

Suicide, we learn, is of very frequent occurrence amongst the Chinese. Feuds and jealousies in families, and distress and poverty amongst the working classes, are the chief causes. The women usually resort to hanging, the men to opium. Drowning is occasionally adopted, and among the rich people swallowing gold leaf rolled up into a ball, and drinking water after it, which speedily causes death, or thrusting loose gold leaf into the mouth until it produces suffocation, are the means generally employed for such a purpose. Four cases are recorded of recovery from the effects of opium taken with a suicidal intent.

The Reports of the hospital at Shanghae, in charge of Dr. Lockhart, embrace the years 1849 to 1853, inclusive, and confirm fully our preceding remarks respecting the existence and influence of miasma as a source of disease,—since we are assured that while the cities, being undrained, are always in a most filthy state, at the same time all those canals into which the tide does not rise are filled with putrid matter of every kind, which is seldom or never removed. The number of cases treated in the year 1849 amounted to 9020, of which the more serious alone were received as in-patients. The Report for 1851 mentions the occurrence of a very fatal form of petechial fever, in which death generally occurred on the seventh or tenth day. This was best treated by "emetics in the first instance, with attention to local symptoms; and the exhibition of camphor and nitre, with the free and early use of quina." During the winter of 1849-50, the poor suffered severely from want of food, work being scarce and rice dear; subscriptions were set on foot, and cooked food largely supplied. The number of cases treated both in and out of hospital during this year was 9352.

The Report for 1852 contains some curious prescriptions, which prove that the Chinese knowledge of pharmacy is much on a par with that of anatomy. We shall transcribe two of them as translated, and regret much that our readers cannot be supplied with the original typography. It throws far into the shade any thing of the kind we have hitherto seen. The first, or "Prescription for Toothache," is as follows:—"Take of chuenleën, 2 drachms; orpiment, 2 drachms; burnt alum, 2 drachms; jiu-chung-pĭh, 1 drachm; burnt borax, 1 drachm; mush, 3 fun; Borneo camphor, 2 fun; fresh liquorice root, 3 fun; bezoar, 2 fun; grind the whole to a powder, wash the mouth with tea, and then with a reed-pipe blow some of the powder on the affected part." The Chinese are thus proved to be acquainted with the use of arsenic as a medicine; and also, it will appear from the following prescription for ague, they have observed its beneficial effects in that disease:—"Take fau-mŭh-peĭh seeds, having removed the shell and roasted the kernel to a black colour, one ounce; levigated orpiment, 1 drachm; levigated cinnabar, 1 drachm; liquorice root, 1 drachm; of the above each dose is to be 4 or 5 fun (24 to 30 grains), mixed with wine, and taken on the day when the attack of ague is expected to come on."

We also find from this Report, that amongst the Celestials there are persons who make a living by maiming their fellow-men; since beggars will invest their capital in effecting the removal of their limbs, that they may the more readily excite the compassion of the benevolent. The plan adopted is as follows:—"Take of chuen-woo, 2 fun; tsaou-woo, 2 fun; naou-yang-hwa, 2 fun; grind them all to a powder, and lay this on the skin of the part for two hours, when the operation may be performed, and no pain felt." There is also a "mode of operating without using the knife:"—"Take oil of pa-tow, 1 fun, and lay it on the part for four hours, and the skin and flesh will be destroyed, or will slough away." The number of cases set down as treated for this year is 10,143, while the Report leads us to believe, that in one respect the Chinese institutions are in advance of ours, for we read, "the funds of the hospital are in a flourishing state, there being a balance in favour of the committee towards the expenses of the ensuing year."

We have been insensibly led to extend this notice far beyond our original design, and yet we have been compelled to omit any account of several deeply interesting matters which these Reports contain. We must not, however, omit to mention, that something in the way of the medical education of the natives, as assistants, has been attempted; and though at present the results are extremely small, they are sufficient to encourage to further exertions. High expectations must not, however, be raised, for though experience has shown that it is a practical thing, yet, with so many other duties engaging the time and the strength of a medical missionary, it is confessedly a very difficult undertaking, especially when those four impediments to which Dr. Hobson has directed attention are considered: 1st, The difficulty of teaching in the Chinese language; 2nd. The want of means to demonstrate by dissection or experiment; 3rd. The want of suitable text-books in Chinese on the first principles of medical science; 4th. The false theories and mode of practice that prevail.

In conclusion, we may remark that, though from the earliest times of history China has assumed a superiority over all other countries; though its rulers and philosophers have ever deemed "The flowery nation," the land of Lotus fields and Azalea hills, as the first on the globe; though, from the highest mandarin to the meanest beggar, each inhabitant is filled with the most conceited notions of their own importance and power—yet they are still a nation singular in their ignorance of many of the most important and necessary branches of knowledge. That the continued labours of the medical missionaries have accomplished much for their social as well as spiritual improvement cannot be doubted; since, being grateful for services rendered "without money or without price," and mindful of benefits so signal in their nature, their nationality has, in many instances, been sacrificed, and the medical and surgical assistance offered thankfully accepted.

An Inquiry into the Pathological Importance of Ulceration of the Os Uteri. Being the Croonian Lectures for the Year 1854. By Charles West, M.D., &c. London: Longman. 1854. 8vo, pp. 95.

For some years back the profession has been divided, as every one knows, respecting the frequency and importance of inflammation and ulceration of the os uteri. The controversy has been sustained with ability on both sides, and, we regret to say, occasionally with much unbecoming warmth. For, be it remarked, it was not merely an abstract question of pathology that was at issue; this could scarcely have provoked so much personal acrimony, or created any division among the mass of practitioners. But a weighty point of direct practical bearing, and of the highest ethical consideration, was involved, namely the propriety and necessity for the use of the speculum in the diagnosis of nearly all female complaints, and for its reiterated employment in the treatment of that disproportionately large number supposed to depend on inflammation and erosion of the os uteri.

Although this practice, and the pathological views on which it is based, met in certain quarters with determined opposition, still they have received full acceptance amongst a large majority of the profession. It may be interesting, and profitable perhaps, to glance at some of the circumstances which, we imagine, have favoured the wide spread of those peculiar doctrines whose fallacy Dr. West labours so successfully to expose: they are pretty numerous:—

1. The novelty of the speculum, and of the pathological reasoning on which its pretensions to importance, as an auxiliary to treatment, were grounded.

2. The fact that both these were of foreign manufacture, and had been imported into this country.

3. The increasing partiality for every mode of diagnosis of a *physical* kind.

4. The simplicity of the doctrine which gave a local habitation and a name to nine-tenths of the complex disorders peculiar to the female generative system.

5. The accessibility of this seat of disease to physical examination and to topical treatment.

6. The *vis ab externo*—the prevalent notion amongst women —especially ladies of rank and fashion (for even in medicine, unfortunately, the tyrant fashion is owned allegiance), that the cause of nearly all their proper complaints is closely connected with an inflamed or ulcerated condition of the womb, for the cure of which local treatment is indispensable. Another reason might be adduced, but we forbear to mention it. Medical men, like others, are only weak, fallible mortals, whose judgment in pathology and therapeutics, as in all else besides, is liable to be weakened or perverted.

It is, then, not so much to be wondered at, that a large section of our profession was carried away by these novel views of pathology and practice, and was found to adopt them in their fullest and widest extent.

A reaction manifested itself some time ago, but its originators, in their zeal to suppress error, overstepped the boundary of scientific truth, and went into the opposite extreme of a too sweeping condemnation of the speculum, and a too unqualified rejection of the pathology which gave it such extraordinary value. Thus, the two extremes being once found, the mean, —the happy medium—was to be looked for as a natural consequence.

It is but just to state that the work of Dr. Tilt, published in 1850, is entitled to some share of credit for contributing to restore our mental equilibrium on this entire question, by directing attention *from* the os uteri to the ovaries, as a centre of morbid action. Such was our conviction at the time, and in our review of that treatise the following remarks will be found to occur:—" We sanguinely hope and expect that one great benefit to science and humanity may arise from the publication of this volume, namely, that it will help to remove the too exclusively local and mechanical ideas now so widely prevalent respecting certain diseases of the womb, and which have led to a system of practice not only of questionable efficacy, but repugnant to that natural feeling of delicacy which, for the wisest of purposes, has been implanted in every female mind"[a].

The appearance of this work by Dr. West we hail with complete satisfaction. It comes most opportunely to meet a great want in our literature, and is eminently calculated to set at rest a much vexed question, by dispelling very many of the hypothetical notions which have been made the basis of the pathology of inflammatory disease affecting the os uteri. Its author—a man of admitted talent and established character—has heretofore occupied a neutral ground touching this controversy, so that he is the better qualified to weigh the value of conflicting evidence, and to decide with unbiassed judgment between adverse opinions. The style of his Lectures is clear and logical; and the tone and spirit which pervade them bespeak the gentleman, and the honest inquirer after truth. All personal allusions are scrupulously avoided, and in no one instance does the author make use of a harsh or discourteous expression. Indeed, he seems to have handled the whole subject with ability, as well as with tact and delicacy. His facts and reasoning tend strongly to show that the importance of inflammation, and so-called ulceration of the os uteri, has been greatly exaggerated; that they are by no means so frequent as has been alleged; and that even when present, these changes rarely occasion that local distress and derangement of the general health so constantly attributed to them. To have effected this much is surely a matter of great consequence, and fully entitles Dr. West to the marked thanks of the profession, and, may we not add, also of the public. We cannot but feel, however, a certain degree of regret that he did not carry his researches still further, and define for us in positive terms the true pathological importance of ulceration of the os uteri: as, from the ability and discernment displayed in the volume before us, we might have expected for this question also an equally lucid and complete solution.

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[a] Vol. x. p. 138, of the present series of this Journal.

Having said so much by way of giving the reader an insight of the general aim and character of Dr. West's book, we shall now lay before him a very brief analysis of its contents. It consists of three lectures which were delivered before the Royal College of Physicians of London, in the beginning of the present year. After some introductory matter, and an enunciation of the question at issue, he proceeds to enumerate the sources of evidence bearing upon this subject. These are arranged under four leading heads, viz., *first*, the anatomy and physiology of the uterus in the state of health; *secondly*, the results of post-mortem examinations, as showing the frequency and extent of morbid conditions of the os uteri, and the connexion that exists between ulceration of the mucous membrane of the os and cervix uteri, and other changes in the tissue of the organ; *thirdly*, the effects of ulceration in the procident uterus: and *fourthly*, the frequency of these ulcerations of the os uteri under those circumstances in which they ordinarily come before our notice, and are supposed to call for interference; including the associated conditions and attendant symptoms.

With respect to the *first* of these sources of evidence Dr. West plainly shows that in the anatomical structure and endowments of the os uteri we find no reason for the greater liability of this part to ulceration, or for the assumption that this lesion, when present, is capable of causing a list of ills so formidable as are attributed to it. He does not push the inference further than this,—though he satisfactorily disproves the alleged higher vitality and organization of the os over the rest of the womb,—and we think he has wisely refrained from doing so. Beyond certain narrow limitations, the normal anatomical structure of a part will very rarely make known to us the particular morbid condition to which it is most liable; nor the degree of liability; nor yet the amount of constitutional derangement consequent upon the development of this lesion, whatever it may be. The first and third of these is ascertained by direct observation alone; the second mainly depends on constitutional influence.

The *second* inquiry, namely, the examination of the bodies of women after puberty, and during the period of sexual activity, Dr. West pursues with the same strict regard to impartiality and fairness. Had it been his wish or object to have underrated the real importance of uterine inflammation, here, at all events, he could have adduced an imposing array of statistical facts to serve his purpose. It does, indeed, seem strange, as he well remarks, "that those who believe in the frequency and importance of ulceration of the os uteri have made no attempt to demonstrate these facts by examination of the body after death; while the only persons who have appealed to its results allege this condition to be very rare and very trivial." He is not, however, by any means satisfied with the way in which this source of information has hitherto been investigated: indeed, no honest man could be.

The facts which have been collected under this head, both on the Continent and at home, are altogether too loose and incongruous to be capable of yielding reliable deductions. The grand object in these statistics apparently was to exhibit a large total,—and this seems to have been done without any concern for the accuracy of the result sought for.

Dr. West next lays before us the particulars relating to the examination of sixty-two uteri, from women of the age of puberty to forty-five or fifty years, which comprehends the era of the generative faculty. Every care seems to have been taken to render the examinations as full and as truthful as possible, and the most captious critic could hardly find reason to call in question the accuracy of these facts. Now the first thing that strikes the reader in looking over this Table is the disproportionately large number (seventeen) which exhibited the os uteri in a more or less ulcerated condition. A shallow reasoner might found thereupon an argument in favour of the frequency and importance of this morbid state of the womb. That it is strong proof of the former—the frequency—cannot for a moment be denied; but that it furnishes any evidence of the latter—its importance—is an inference as untrue as it is illogical. Besides these seventeen cases, the Table contains twelve others which presented uterine disease, without any accompanying ulceration of the os: *five* were examples of induration of the walls of the uterus; and *seven*, disease of its lining membrane. Now let Dr. West speak:—

> "There is certainly something at first not a little startling in the result at which we arrive, that the womb was found in a perfectly healthy condition in little more than the half of sixty-two women, none of whom died of uterine disease, nor were supposed to be suffering from any grave uterine ailment. But it may—it ought indeed to be—asked what is the value of these appearances? Some of them may be of little moment, and the very frequency of their occurrence, instead of substantiating the opinion that they are of great importance, rather militates against that supposition.
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> "When ulceration of the os uteri was first observed, it was natural enough to attribute to it many symptoms, and to refer to its influence many structural changes. But what if such ulceration be found to be usually very limited in extent, and so superficial as to be unassociated with changes in the basement membrane of the affected surface, and exercising so little influence on the state of the uterus in general, as to be unconnected in a large number of instances with changes either in the interior of the womb, or in its substance; while induration of the uterine tissue, and disease of the lining membrane of the womb, are found independently of it, or of each other? Should such appear to be the case, it will, I think, be rendered in the highest degree probable that this abrasion of the os uteri has not the long train of sequences which have been supposed to follow it, but that it is of comparatively small pathological import; that it may be found to vary under the influence of comparatively trifling causes; and not unfrequently to be dependent on functional disorder of the uterus, just as the mucous membrane of the tongue and mouth betrays the disturbance of the digestive system; that it may, in short, be the consequence, and sometimes the index, but rarely the occasion, of the ailments with which it is associated."

In the great majority of instances ulceration of the os uteri is generally believed to give rise to induration of the cervix, the result of the extension of the inflammation to it, and of the effusion of plastic lymph into its structure, which lymph comes by degrees to be more and more organized. This description Dr. West looks upon as purely imaginary, and unsupported by proof; and he well observes "that few things have so retarded the advance of medical knowledge as the accepting some plausible hypothesis as if it were a statement of well-ascertained facts, and then proceeding to reason from it as from some secure basis." From an examination of nine cases (of the sixty-two already mentioned) in which this indurated condition was present "it appears," he observes, "that most marked induration of the tissue of the cervix, and of part of the body of the womb, may exist where there is no other trace of inflammation either past or present." This conclusion is fully sustained by another series of cases cited at a more advanced page of the book.

We now come to the *third* point of inquiry, namely, ulceration of the mouth of the prolapsed womb. The author attaches no decisive value to the evidence derived from this source. For though he thinks it must be conceded by all observers, that the symptoms supposed to characterize inflammation of the neck of the womb, and ulceration of its orifice, are not met with either constantly or in a specially marked degree in cases of prolapsus uteri, still he does not feel justified in drawing an absolute conclusion from what is observed in the misplaced uterus, as to the effects produced by similar ailments attacking the organ when in its normal situation. This is certainly acting with extreme caution and reserve, and we highly applaud Dr. West for it. But we feel pretty sure that to many other minds the data would warrant a more positive inference. Guided by analogy, our own interpretation of the facts is simply this,—the symptoms proper to the ulceration are obscured or rendered latent, owing to the presence of a greater and more important disease, i. e. the prolapsus: in fact it is an acknowledged principle, that "where a great malady is found, a lesser is scarcely felt."

The *fourth* and most important point involves this inquiry, what does clinical observation generally teach us concerning ulceration of the os uteri,—its course, its symptoms, and its importance? The solution of this question occupies nearly the entire of the second Lecture, at which we have now arrived. But we can only make a few extracts from this and the remaining Lecture, so that our comments must be brief.

With a view to test the correctness of the opinion, so much insisted on by a certain class of writers, that local injury on the neck of the uterus is a common cause of inflammation and ulceration of this part, owing to its peculiar sensibility, and its extreme readiness to take on this form of diseased action, Dr. West examined *forty* women on their admission into the venereal wards of St. Bartholomew's hospital.

> "Of these forty patients, eighteen suffered from gonorrhœa alone, ten from gonorrhœa and syphilis, and the remaining twelve only from syphilis. The cases were unselected, and the examinations were made as soon as possible after the admission of the patients into the hospital. In twenty-seven instances the os and cervix uteri were absolutely healthy or presented only, and this but rarely, a slight blush of redness, deepening the natural hue of these parts. In ten of the remaining thirteen, the ulceration, if indeed it deserved the name, was a mere excoriation not above a line in breadth, partially or completely circumscribing the os uteri, but associated with no other change of its tissue. In the remaining three cases the abrasion was more extensive, surrounding the os uteri for about a third of an inch; and in the case of one of these three, that of a woman who had given birth to children, the lips of the os were noted to be elongated: this, however, was the nearest approach to a hypertrophied state of the cervix met with in the whole forty cases; while in no instance was there any such alteration of the texture of the part as to deserve the name of induration.
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> "These facts, however, after all, prove no more than this, that the susceptibility of the os and cervix uteri to the effects of local injury has probably been over-estimated."

These clinical facts, though deeply interesting in themselves, do not directly aid us, however, in solving the great question of which the volume treats; and this Dr. West, moreover, fully admits. We find him dividing the cases of uterine disease into two grand classes, depending on the presence or absence of ulceration of the mouth of the womb. He thus proceeds to investigate, and compare together, certain normal and morbid states of the uterus in these two divisions. The materials which serve him for this purpose are the records of 1226 cases treated at St. Bartholomew's and the Middlesex hospitals. But we cannot follow the author in his exploration of this rich mine of experience. Suffice it to say that here, as elsewhere, he evinces that cautious system of induction which we think constitutes a distinguishing and most important feature of this treatise. Among the conclusions to which he is led by the careful analysis of this vast collection of data, we find that—

> "It does not appear that ulceration of the os uteri exerts any special influence either in causing sterility, or in inducing abortion." And again, "while the symptoms are identical in character in the two classes of cases, they seem to present a slightly increased degree

of intensity in those instances in which ulceration of the os uteri existed;" and the general conclusion at which he arrives, as the result of this careful and delicate inquiry, is contained in the following sentence—"I do not regard ulceration of the os uteri as the general cause of the symptoms which have been attributed to it, or even as a general concomitant of them, and index of their degree and severity."

Having thus, after much unsparing labour, and patient research, discovered the fallacy of some of the fundamental opinions widely prevalent at the present day on this subject, the imposing superstructure of uterine pathology and therapeutics reared upon them by modern ingenuity, at once falls to pieces, and leaves scarcely a trace of those essential characters said to belong to ulceration of the os uteri, and which placed it beyond the sphere and influence of the ordinary laws that govern and regulate diseased action in the rest of the body.

Having, we repeat, achieved this important result, Dr. West next applies himself to expound his own views respecting the true pathological value and significance of the lesion under consideration. It might be expected that he was prepared with some solution of these different morbid phenomena, equal in simplicity and universality of application to that which he rejects. He does not keep us long in suspense on this point, but at once admits his inability to put forward any such pretensions; and modestly states, that all he can attempt to do is "to furnish a few illustrations of the subject, such as may serve, if to do no more, at least to show the direction that investigation should take, in order to remove the difficulties by which it is surrounded." But, in truth, in doing this Dr. West is laying the only secure basis on which to found the pathology of the uterus, or of any other organ or part of the body; and is rescuing this particular viscus from the strangely anomalous and exceptional position which it has hitherto held in respect to some of its morbid states. Of the third Lecture we can only further say, that it well merits the attentive perusal of all engaged in the treatment of female complaints. Indeed, we heartily recommend this work to our brethren, as one of the most valuable monographs which has ever appeared on the subject of which it treats.

We cannot close this notice, extended though it be, without making one more quotation, the truthfulness of which will, we venture to say, be attested by the experience of every reflecting observer:—

"It would be a matter of comparatively little moment whether the views which I believe to be erroneous really were so or not, if they led to nothing more than an over-estimate, on the part of some practitioners, of the value of a certain kind of therapeutical proceeding. But their evil, if they be erroneous, does not cease here; they exert an injurious influence both on the patient and the practitioner. . . . . . Any course of proceeding, then, which, without the most urgent and absolute necessity, directs the patient's attention, in the slighter ailments, painfully and frequently, to her uterine system, is in the highest degree objectionable. The patient recovers from her illness, but with the impression that all the sensations that for weeks or months before she had experienced were exclusively due to the local disease which had called for local remedies. On the first return of any symptoms resembling them, all her apprehensions are revived, lest the same painful investigation, the same distressing manipulations as before, should be again required. . . . More or less discomfort—often indeed, much positive pain—attends in the great majority of women upon the performance of the menstrual function, precedes or follows it. These pains are now thought to be of more importance than before; their occurrence is watched for, the suffering of one month is weighed against that of the month before, as the woman thinks she finds in its increase or diminution grounds for hope or for apprehension. But the sensations thus attended to increase in intensity and in persistence; the slight ailment which, but for the coming evil that it is supposed to portend, would in a few days be forgotten, is noted with anxious vigilance; and the more it is observed, the more it seems to grow; she fears she never will be well again, and at length makes up her mind once more to go through the same treatment as before relieved her, though it brought to her the painful revelation of the grave cause on which her sufferings, once thought so little of, in reality depended. Such persons among the poor come to our hospitals; and on questioning them as to their ailments, they at once, and without waiting to describe their symptoms, say that they are suffering from ulceration of the womb: though on examination one finds no trace of it, or at most a little redness of the edges of the os uteri, or it may be even that slight abrasion which I trust I have shown to be as trivial in importance as it is frequent in occurrence. But though they have no serious disease, they are not the less, or, perhaps, one might say all the more, real sufferers, and sufferers most difficult to cure. The treatment they are, perhaps, once more subjected to serves but to confirm the morbid habit of mind which has been gradually increasing upon them, and destroying both their present happiness and their capacity for it in future years. They are the victims, I believe, not of the want of honest purpose, or of high motive in those who practise our art, but of an erroneous opinion."

Pneumonia: its supposed Connexion, Pathological and Etiological, with Autumnal Fevers; including an Inquiry into the Existence and Morbid Agency of Malaria. By R. La Roche, M.D., Fellow of the College of Physicians of Philadelphia, &c. Philadelphia: Blanchard and Lea, 1854. 8vo, pp. 502.

In a prefatory dedication to Dr. Meigs, unusual in its length, the author fully sets forward the reasons which led to the publication of the present volume. It appears that it originated in a letter of a dozen pages to a friend, intended to refute the opinions advanced by him in a certain essay, in which it was advocated that pneumonias, occurring sometimes sporadically, and frequently epidemically, are really and substantially nothing more than a peculiar form of remittent and intermittent fever. The friend would not be convinced, and a correspondence ensued, to which we are indebted for the present work, containing 500 closely printed pages; affording a great amount of interesting and instructive matter, the result of enthusiastic research and close observation.

Dr. La Roche proposes to himself to prove, that the supposition of the identity of these diseases, whether etiologically or pathologically considered, is founded on insufficient or incorrect data; with this object the views of various writers on the subject, and the result of their experience in different countries, are critically examined. Their investigations, and the arguments they originate, occupy the first and the last three chapters of the volume under consideration:—

> "The reader will easily perceive," writes Dr. La Roche, "that, before the advocates of the identity of the two diseases can successfully sustain the position they have assumed, it will be necessary for them to show that autumnal fevers and pneumonia are produced by the same causes; that they prevail in the same places, and during the same season of the year; that their existence and diffusion are promoted by the same agencies; that they are arrested by similar means; that they exercise their effects on the same classes of individuals; that they present similar or kindred symptoms; that they affect the same organs, and produce the same or analogous changes in the fluids and solids; that they are governed by the same laws; and that they present other points of approximation invariably found to be possessed by diseases between which there exists the close connexion claimed in the instance before us. Unless they can succeed in attaining these objects, their opinion must fall, and the independence of those diseases be admitted. It becomes neces-

sary, therefore, to take up each of these subjects separately, and to ascertain how far they may be appealed to in respect to the question at issue."

In corroboration of the foregoing, the principal dissimilarities between pneumonia and autumnal fevers are prominently and fully set forward. It is established from numerous authorities, and confirmed by Dr. La Roche's experience, that pneumonia is of common occurrence where fevers seldom or never are seen; that pneumonia is not necessarily prevalent where fevers are common; that the two diseases prevail in different seasons; that they appear under the influence of opposite winds; that pneumonia is of yearly occurrence, not always so fevers; that their altitudinal range is not the same; that fever is influenced by the nature of the soil, not so pneumonia; that fevers are arrested by frost, not so pneumonia. Having fully pointed out these important differences between the two diseases, Dr. La Roche, at the conclusion of his sixth chapter, proceeds to further argue their essential dissimilarity from the fact of their non-convertibility, and, quoting the opinion of Dr. Drake, that when fevers "possess many deep-seated analogies and identities, they frequently change from one type to the other," adds, "So far as I am aware, the physician is yet to be found who has discovered that pneumonia and periodic fevers are convertible diseases in the way that the several forms of these have been shown to be."

The observations of Dr. La Roche leave no doubt that those who advocate uniformity in causation and identity in nature of both autumnal fevers and pneumonia, thereby affirm that the same agent is capable of manifesting its effects in a manner widely dissimilar, either as regards the symptoms, progress, and termination of disease during life, or the nature and extent of the pathological conditions revealed after death. The adoption of such a doctrine certainly tends to simplify medicine, but we question much if those principles which observation has established and experience approved would not thereby be perpetually violated. We cannot in the absence of certain grounds for opinion infer the nature of causes otherwise than through their effects, and it would be most illogical to admit a dissimilarity in causes which we deny to effects, unless we allow some modifying power in the medium of manifestation. Were we to adopt this latter view, we should for the solution of the question before us be in no better position; since, in individuals whose constitutional aptitude for disease experience leads us to regard as closely identified, we could only infer this modifying power through the peculiarity of the symptoms; and it certainly is a far more probable conclusion that different results are owing to different agencies, than that individuals whose constitutional tendencies are in all other respects almost identical, should in one particular instance, from an uniform source, experience effects so widely different. That Dr. La Roche has fully established his views respecting the non-identity of autumnal fevers and pneumonia, we are satisfied his readers will fully admit. The non-identity of these affections is, however, no argument against their compatibility. Gastritis, hepatitis, enteritis, and phrenitis may, it is quite possible, be witnessed during the progress of an ordinary epidemical fever. If in autumnal fever pneumonia be more frequent than any of these, surely we are not, therefore, warranted in seeking to identify the one with the other, even though we admit the practical truth, that such special phenomena may so closely respond to the general condition, as, to all appearances, to be obedient to the same laws of periodicity, and proceed to their eventuation *pari passu* with the disease they complicate.

Why it is that certain morbific agents manifest a peculiar affinity for special organs we are not in a position to determine. Hunter observed "poisons take their different seat in the body as if they were allotted to them." "If," to use the words of Mr. Ancell, "we were to attempt to explain how it happens that particular organs are affected rather than others, we must do so upon the most crude hypothesis." We must, therefore, as well observed by M. Piorry, "accept the facts, without being able to account for them."

The estimation in which Dr. La Roche holds such cases, and his general views respecting their non-identity with fever, will be best inferred from the following quotation:—

> "So far as I am concerned, I have no hesitation in stating, as the result of my personal observation, aided by extensive inquiry and close reflection, that pneumonia is not *sometimes*, but *always* an idiopathic disease, whether it occurs sporadically or epidemically; whether in fever districts, or in fever seasons, or in places or at periods of the year free from periodical fevers; and that it is due to causes perfectly distinct from those to which such fevers owe their origin. I believe this, and believe, besides, that even were pneumonia produced at times by the legitimate causes of fevers, such causes would not be any more symptomatic than those that are due to the ordinary causes of the disease; for these do not act directly and primarily on the lungs any more than the others would do, supposing them capable of giving rise to the effect in question. And as in either circumstance the primary impression is received by some

other part of the system, and thence reflected on the pulmonary organs, the two sort of cases must be placed on the same footing, and be all primary or all secondary."

The fact of pneumonia sometimes assuming a periodic type, Dr. La Roche contends, argues nothing in favour of its malarial origin, unless we are prepared to extend the same observation to all other affections, in which perfect or imperfect remissions are noticed,—whether occurring in places subject to or perfectly free from malarial complaints. The author, while strenuously advocating the malarial origin of autumnal periodic fevers, by no means advances the doctrine that periodicity is confined to febrile diseases of such a type. On this particular point he thus writes:—

"Intermitténce, indeed, may well be viewed as an element essential to the existence of the normal actions of the economy. What is more, it adheres to these actions in their passage from the state of health to that of disease; and may, therefore, be recognised as an element of this state also. It stands as an illustration of the great law of periodicity which regulates all vital movements."

The occurrence of epidemical pneumonia presenting one of the strongest arguments against Dr. La Roche's views, calls forth the following remark:—

"If sporadic cases of pulmonic inflammation can and do arise from the operation of causes totally unconnected with the existence and evolution of miasmal exhalations, there is no reason why the epidemic form of the disease should not be assigned to the same or similar agencies acting more extensively, in consequence of a universal state of predisposition brought about by a peculiar, insensible, and unfathomable condition of the atmosphere."

The same arguments previously advanced, require but a more extended application for the explanation of such circumstances. But, inasmuch as it may be contended that epidemical influence implies a general prevailing cause inexplicable on other grounds than the existence of miasmatic agency, and also that there are equal grounds for inferring its presence in one case as in the other,—Dr. La Roche observes:—

"At any rate, if the morbid agent giving rise to this and the preceding form of disease (influenza) must really be viewed as nothing more than a species of malaria, that malaria can bear no analogy to the one producing autumnal fever."

The opponents of Dr. La Roche's views, in reply, contend that the malarial origin of these febrile diseases is by no means established, and advance in support of their dissenting opinions the fact that epidemics occur under various circumstances, and in the most dissimilar situations. This calls for a decided avowal from the author:—

> "For my part, with due deference to the judgment and learning of those who entertain an adverse opinion, I have no hesitation in saying that the more I examine the subject, the more I am convinced that those who ignore the existence of malarious exhalations, and deny their morbific agency, labour under a great error, and contend for what they cannot prove. Nay, more, I am convinced that autumnal and endemic fevers, of genuine character, are never due to any other cause than such exhalations."

In support of this affirmation Dr. La Roche proceeds to enter into an elaborate examination of the question of malaria, and an analysis of the opinions of those several writers who, at different periods, and in separate countries, have devoted attention to its investigation. This portion of his work evinces patient and laborious research, and is well deserving the perusal of all anxious to be informed on the subject of which it treats. Admitting the truth and value of the author's observations on the associations of malaria, we still believe the inference he would seek to establish—the existence of a specific malarial poison—is one on which the profession will not so readily agree. Arguments closely analogous to those he has advanced in support of his first proposition—the non-identity of the two diseases we have been considering—may be placed in opposition to his second, or, the uniformity of malaria as the cause of epidemical fever. The evidence is indubitable, that if fever can only proceed from such a source, it must be met with in the most dissimilar situations, and under circumstances wholly without analogy; at different seasons, in summer as in winter; in different situations, on mountains or in valleys; on different conditions of soil, dry sandy situations or marshy swamps; under various circumstances, in towns or in country; from the decomposition of different substances, animal or vegetable. We might extend those differences, and point out many other dissimilarities in circumstances presumed to originate, and known to accompany epidemic disease. To contend for an identity of effect from such a variety of causes would be simply to make an affirmation, and then throw the onus of its refutation on those dissenting from its adoption. Fortunately, however, for mankind, where the arguments in determining certain questions are so evenly balanced as to leave their adjudication still open to discussion, the practical inferences derivable from their investigation are usually sufficiently distinct as to admit of little doubt respecting their beneficial application. So that, in recognising the circumstances most generally accompanying, if not originating, this exciting or favouring influence, of whatever nature it be, malarial or otherwise, we may, in their removal, effect much real and tangible good. We have, therefore, no hesitation in receiving Dr. La Roche's book as a valuable addition to our literature, for while entering most minutely into the subject of pneumonia and autumnal fevers in their contrast one with the other, it also supplies us with an amount of knowledge on the sources of epidemical influences, not to be found in any other work with which we are acquainted.

Dr. Conquest's Outlines of Midwifery; intended as a Text-book for Students, and a Book of Reference for Junior Practitioners. A New Edition. By J. M. WINN, M.D., &c. With numerous Illustrations on Wood. London: Longmans. 1854. 12mo, pp. 323.

THIRTY years' public approval renders a book nearly independent of criticism. The shaft of censure or the trumpet of praise then matters little as regards its future existence. A work so circumstanced has survived at least one generation, and even unaltered is pretty sure of reaching a green old age,—if it do not become absolutely imperishable. Such a work is "Conquest's Outlines of Midwifery," thus long admitted to be one of the best manuals of its kind extant. It is with the editorial additions and emendations of Dr. Winn we shall, therefore, have to deal.

His task must, indeed, be admitted to be the more arduous in proportion to the approbation alluded to, and yet to add, as well as to emend, is not the less imperative in compliance with the advance of science. In the first part of the work, devoted to a consideration of the parts of the skeleton concerned in parturition, we find some useful comments on the text, as well as some important additions. Those on deformed pelvis are practical and concise. Dr. Winn says:—

"The only practicable (practical) mode of measurement is by means of the fingers or hand. If, when one or two fingers are passed into the vagina, the promontory of the sacrum can be felt, it is a sign that the conjugate diameter is preternaturally diminished. In a similar manner the oblique and coccy-pubic diameters may be determined. A notion of the size of the pelvis may also, to a certain extent, be formed by examining the shape of the bones *externally*, by means of the hand."

In speaking of ovariotomy, which he seems to regard in a rather favourable light, though a dark side of the picture could be easily shown, he refers to some successful, though unpublished, cases of the operation by an able surgeon, Mr. Borlase Childs. Menstruation and conception,—subjects the knowledge of which has been of late much advanced, are enlarged consistently with the limits of the work. Of remedies for mennorrhagia Dr. Winn regards acetate of lead "as the most powerful astringent." We unhesitatingly, however, join issue with him in this, our own experience leading us to place most confidence in *good* ergot of rye, in small but repeated doses. On the indiscriminate employment of the speculum he says:—

> "I consider that some deservedly high authorities have countenanced unintentionally the abuse of the speculum, by recommending its use in cases of simple abrasion of the os uteri. They state that this condition cannot be detected by the touch. Granting this, of what avail is the discovery? The destruction of portions of the epithelium by the *alkaline* discharges of uterine leucorrhœa is, no doubt, a frequent and comparatively trifling occurrence; but, on the subsidence of the leucorrhœa, the epithelium is quickly renewed. Does a simple abrasion of the mucous membrane of the mouth, occasioned by hot or pungent food, require minute examination, and caustic applications?"

Some omissions in Dr. Conquest's concise but excellent observations on the phenomena of utero-gestation are well supplied. A case of salivation occurring in American practice is mentioned. Not long since we met with a remarkable instance of this rare complication. A lady, twenty-seven years old, and in her first pregnancy, was affected, about the end of the second month, with constant and excessive salivation, attended with complete loss of appetite. This only subsided with the completion of labour, which was favourable, notwithstanding a very depressed condition of the general health, the effect of the drain upon the system. The lady has since been twice pregnant, but has had no return of the salivation. Dr. Winn correctly regards secale cornutum in parturition to be "not only a safe, but a valuable remedy when judiciously given." With regard to galvanism, he contents himself with enumerating opposing authorities as to its action on the uterus. At a late meeting of the Medical Society of London the great discrepancy of opinion on this subject was attributed, by Dr. M'Kenzie—in a discussion upon a case of Dr. Winn's, in which galvanism appeared to have acted merely as a diffusible stimulus—to the usual employment of a double current, which Dr. M'Kenzie contended is much inferior, as regards action on the uterus, to the single one. We confess we do not understand why this should be so, but it deserves consideration. In the treatment of rigid os and cervix uteri, after the failure of venesection and purgatives, Dr. Conquest had recommended the exhibition of from one to two drachms of tincture of opium by the rectum, or rubbing the os with from one to two drachms of extract of belladonna. To the latter practice Dr. Winn properly objects, that "belladonna is a remedy that must be used with great caution; and later experience has thrown much doubt on its power of inducing relaxation of the os uteri." The friction necessary in the application is also objectionable. To the large opiates we must add our own demurrer, especially as we possess a remedy of great efficacy in tartar emetic, combined with moderate doses of opium. The mention of tartar emetic by the editor we regard, even of itself, as no inconsiderable addition to the practical value of the manual. In another part of the book Dr. Winn justly condemns the dose of opium (four to five grains) recommended by Dr. Conquest in uterine hemorrhage, as a modification of more heroic practice. Good authorities altogether deny its utility in this affection. Between the author and his editor there is also some discrepancy of opinion on the subject of instruments. Certain modifications of the short forceps, as is pretty generally known, were made by Dr. Conquest; but Dr. Winn states that Dr. Conquest's long forceps is a "much more valuable instrument, and that Dr. Conquest now uses it in all cases where the head is arrested below, as well as in those in which it is obstructed at the brim of the pelvis," which is tantamount to saying, that he uses it in all cases in which a forceps is useful. The movable handle of Dr. Conquest's forceps is objected to because "the blade cannot be so easily introduced without as with the handle." We agree with Dr. Winn that it is a complication which may be dispensed with, by placing the patient sufficiently near the edge of the bed, when the difficulty about the fixed handle vanishes. The position is otherwise the most favourable as regards the operator. All practical men will agree with the editor, that "the long forceps, in unpractised hands, is a dangerous instrument; but in those accustomed to midwifery operations it will frequently be found a most valuable appliance." The author's commendation of this instrument is quite unqualified. Dr. Winn has described and figured a craniotomy forceps by Mr. Ferguson, the instrument maker, which appears to us a decided improvement on those usually employed.

Once more we find our author and his editor slightly at variance. It is on the subject of turning, the question being about their coats! Dr. Conquest would have us retain these garments on the score of delicacy during this operation, whilst his editor contends that delicacy "must not interfere with a strong sense of duty."

On the subject of chloroform, one of course entirely the editor's, he justly condemns the use of it "by midwives, and even nurses in Scotland, and with the approval of Dr. Simpson." We can excuse much enthusiasm about this potent and valuable agent in its distinguished discoverer, but are compelled unhesitatingly to dissent from its employment except in professional hands. Our list of casualties from its administration, under the most favourable circumstances, is already sufficient to warn us of the responsibility which its use entails.

In compiling a manual, condensation of practical information should be the great aim. In this respect the work of Dr. Conquest is excellent, and we must say that therein it is not likely to lose any of its reputation from the revision of his editor. A number of well-selected and well-executed illustrations have been added. Altogether, we do not hesitate to recommend the new edition to the student and junior practitioner as one of the best books of its compass in the language.

Traité des Maladies du Sein et de la Région Mammaire. Par A. Velpeau. Paris: Victor Masson. 1854. 8vo, pp. 727, with 8 coloured Plates.

This volume, though somewhat bulky, is a valuable contribution to practical surgery. Where the author keeps close to clinical observation and its results, his remarks are sound and will be read with advantage by even the oldest and most experienced; but as often happens with men of this practical turn of mind, he seems denied the power of deducing from his experience the general principles which a bystander will readily perceive. We shall, therefore, in the following pages endeavour to give an analysis of those parts which may be read with profit, avoiding, as far as possible, the regions of theory; and in this course we are the more justified as the book contributes but little to those scientific points which, in the present day, largely occupy the attention of the profession. With regard to tumours, both in nomenclature and in principle, M. Velpeau is a decided conservative. He retains the terms, benign and malignant: and to save confusion, we shall use them throughout our notice of his book. He refuses to accept the separate classification of epithelial and fibro-plastic tumours as comparatively innocent growths, and this not from inability to diagnose them, or from ignorance of at least some of their properties, but from ascribing to them all the direful powers of genuine cancer; and in such a manner as would almost lead us to suppose that he considered them absolutely and equally fatal and destructive. When we come to look over the cases which he gives to support these views, we find them, as is to be expected, quite exceptional. The occasional recurrence of epithelial tumours in parts not exactly continuous with the original seat of growth, and similar results with regard to fibro-plastic tumours, constitute his whole proof. There is, no doubt, some appearance of truth in these cases; but when laying down broad principles, we must avoid exceptional cases, or we shall be continually falling into error. Few surgeons will deny that scirrhus and encephaloid are, generally speaking, fatal affections,—a fortunate exception does not invalidate the rule. Few microscopists will assert that cancroid and recurrent fibroid or fibro-plastic tumours are invariably curable by even early operation,—the occasional exception must not be allowed to invalidate this rule. Let, therefore, the clinical observer join heartily with the microscopist, and the characters of even these exceptional cases will, it is probable, be in time cleared up.

We shall now proceed to give our readers a glance at the views and opinions of one of the first surgeons of the modern French school, on the important diseases to which the breast is subject.

The first section of the book is devoted to the consideration of *diseases of a benign nature;* and in the first chapter, *inflammatory affections* are described.

Nothing very novel is to be expected in the articles on eczema, excoriations, and fissures. The plan which the author recommends as most effectual for the treatment of fissures, is light cauterization with nitrate of silver; he also speaks highly of collodion: both substances form an excellent artificial cuticle, but they have the disadvantage of being very painful. M. Rossi has asserted that fissures and excoriations depend upon an aphthous condition of the child's mouth; in general, however, as M. Velpeau remarks, the fissures exist before the aphthæ. We have found honey the nicest application to excoriations and fissures ; it gives no pain, and encourages the child to take the breast; and if aphthæ exist in the infant's mouth, it assists in healing all at the same time: it may be used either alone or combined with borax.

Velpeau divides inflammation of the breast, as is now generally done, according to its anatomical seat into subcutaneous, submammary, and parenchymatous or glandular. The first is a simple affection, which can generally be resolved by leeches applied over the inflamed part; if it be left to run its course it terminates in a small abscess, which closes up in a week or two. There is, however, a rare and dangerous variety, in which the inflammation becomes rapidly diffused, the breast appears to be suddenly enlarged throughout its entire extent, and the pulse becomes frequent, small, and compressible ; the inflammation has spread to the intralobular tissue, and if not checked by deep and numerous incisions, will produce gangrene of the entire organ. The author claims to have been the first to describe this affection.

2. Deep or submammary inflammation is modified both by position and by the anatomical peculiarities of the structure in which it is seated. The areolar tissue, which connects the gland with the pectoral, is condensed and laminated; when the breasts are pendulous, or very large, a sort of bursa is developed in them, to which M. Nélaton first drew attention ; and the outer and inner margins of the gland are bound down more firmly than the other two: these circumstances explain some of the phenomena of deep phlegmon. The whole breast enlarges, especially in depth or thickness; the skin becomes hot, polished, and covered with blue veins; there is a considerable amount of deep aching pain, which is little increased by pressure: in this it differs from superficial phlegmon, which is very painful to the touch. Matter forms rapidly; leeches may be applied, not over the tumour, but round its base; but they are little to be relied on. Fever runs high, and calomel or tartar emetic, which in superficial phlegmon is useless, is of magical effect in the early stage here.

3. Parenchymatous inflammation, *adenite mammaire*, may attack the gland in one point or in many, and may creep from one lobule to another, so that months may elapse before a cure is effected: difficult to resolve by antiphlogistic treatment, it generally causes a succession of abscesses, in the latter stages of which compression is useful.

Abscess of the breast is divided in much the same manner as simple inflammation. The small furuncular abscess of the areola is recommended to be opened early, before the skin has time to thin. The proper subcutaneous abscess is said to be found most commonly at the outer and lower part of the breast, next at the upper and inner; the attachment of the adipose layer to the deep fascia prevents the appearance of matter along the two other edges of the gland. This abscess is often multiple, especially when connected with parturition. The solitary abscess resembles a boil, both as to causes and progress, and seldom occurs during pregnancy or lactation; both should be opened early, otherwise they lead to the formation of sinuses; they can seldom be resolved; but if the patient has an invincible horror of the knife, a large flying blister may be applied, which, strange to say, alleviates the pain, and may possibly resolve the inflammation, although in general it hastens suppuration.

The early symptoms of submammary abscess have already been given under the head of deep inflammation; to these he adds:—

"If after a week of inflammatory symptoms the general reaction, heat and pain, abate, while the tongue remains foul, and the breast continues undiminished in size, we may be sure that an abscess has formed; no doubt can exist if there be at the same time a slight puffing either round the breast or on its surface, especially if this sort of œdema takes the impression of the finger, and there be along with it a certain amount of redness, and if for some days irregular rigors have taken place in the evening."

A variety of this abscess is what he calls shirt-stud abscess, a large subcutaneous cavity, which communicates through the gland with a similar deep abscess,—a form very hard to cure. With regard to the opening of the sub-glandular abscess, he remarks,—"The place of election for the employment of the bistoury is the external and inferior side of the circumference of the breast, or else, the lowest point of the depot. The place of necessity is indicated by secondary elevations containing pus, and may consequently be found upon every point where the skin becomes thinned, . . . the opening ought to be large; it is better to make it perpendicular to the plane of the thoracic parietes, as there is then less danger of its closing too quickly."

When a deep abscess becomes fistulous, he advises the whole track of the fistula to be laid open, even if it necessitate the dividing of the breast from end to end; we are to spare neither the number nor the length of the incisions. Hey first recommended this unnecessary barbarity, which Sir Astley Cooper opposed, we must say, with reason, for there are few cases of fistula which will not close when a good depending opening has been made. Even when they are numerous there is a central cavity (Nélaton's bursa) to which they all tend; and by opening this freely and keeping it so, the sinuses will gradually close, particularly if injections of solution of nitrate of silver and of tincture of iodine be used, with well-managed compression. These latter means we find recommended in another part of the chapter, when the incisions aforesaid have failed to bring about a cure in the course of a few weeks. We may ask why not try the milder means first?

The true glandular abscess occurs almost universally in connexion with lactation; it is the genuine milk abscess. Two forms are distinguished, that which commences by obstruction or engorgement of one or more of the milk ducts, and that which begins in the lobules or acini; the latter is the most common of all the forms of abscess in the breast; of 200 cases of it only 30 were unconnected with lactation. "To speak generally, parenchymatous abscesses are to be apprehended both in nurses and in those who do not nurse less and less as the period of accouchement becomes distant." Their progress is slow and their duration is considerable, even independently of the fact that several may form in succession. He speaks of having seen fifty-two distinct abscesses in one breast one after another. The following observations are judicious, and founded upon sound pathological principles, which will always be found to agree with the results of experience. "Early opening, useful in subcutaneous abscesses, and, as I have already said, in those that are deep, is evidently less advantageous, if it is not even injurious, in the parenchymatous. All that has been said of late incision, of spontaneous opening, of small incisions, in reality applies with probable justice to those depots only of which I am now speaking; for they are the only variety in which there seems to be some advantage in not being in a hurry, and in giving time to the sac to open of itself, or at most in opening it occasionally by a sort of puncture." So easy is it by a correct diagnosis of the variety of tumour to lay down a correct rule of treatment. In this accuracy of minute shades of diagnosis we must yield the palm to our foreign brethren.

The second chapter has for its subject all benign diseases of a non-inflammatory nature. We are obliged to pass over the greater portion of it from inability to make a fair analysis of its contents in a reasonable space. Indolent benign tumours as thus classified:

1. Hypertrophy
    - of the gland.
    - of the areolar tissue.
    - of the adipose tissue.
2. Engorgement
    - of the areolar tissue.
    - of the glandular tissue.
3. Cysts . . .
    - sebaceous.
    - gelatinous.
    - hematic.
    - milky.
4. Tumours .
    - lipomatous.
    - fibrinous.
    - butyraceous.
    - tuberculous.
    - osseous.
    - granular or nodular.
    - adenoid, called partial hypertrophies.
5. Imaginary tumours!

To show how difficult it is sometimes to distinguish one tumour from another, the author relates two instances in which a simple lipoma was mistaken, in one case for encephaloid cancer, in the other for a cyst; the mistakes not being discovered until after operation.

M. Velpeau differs from Sir Astley Cooper as to the frequency of the occurrence of hydatids in the breast; this difference of opinion, with many others similar to it which are to be met through the book, results from an imperfect perception of Sir Astley Cooper's meaning on M. Velpeau's part: the term hydatid was used by the English surgeon in the wide sense which its derivation would seem to warrant, as a tumour containing a watery fluid; while the other confines it, as is now generally done, to the verminous hydatid, and classes the rest as cysts of various kinds.

The article upon adenoid tumours will, perhaps, attract more attention than any other in the book. These tumours, called also fibrinous, fibrous, and scirrhoid, are better known in this country as chronic mammary tumours. Velpeau is of opinion that they are essentially different from simple hypertrophy of the mammary gland or of one of its lobules, and that their analogy to the glandular tissue results from their being formed in its neighbourhood, just as the fibrous tumours of the uterus resemble its normal structure, in the midst of which they are developed. Sir A. Cooper and others have stated that they have often found these tumours attached to the gland by a pedicle of fibrous structure, and sometimes by a portion of gland tissue. Velpeau asserts that they are always unconnected, even by community of vessels, and that the others have confounded the true adenoid tumour with hypertrophy of the gland. With all deference to M. Velpeau, we cannot accept his dictum as sufficient evidence; if we read Sir Astley Cooper's case with care, it is plain that he did not fall into this error of diagnosis; and we think it would have sufficed for M. Velpeau to have stated his experience without such despotic condemnation of those opposed to him. That these tumours are occasionally hypertrophies of small outlying lobules of gland tissue, we have no doubt, not only for the reasons given by Cooper, but because he and others have found them continuous. We have also seen them connected by fibrous bands to the envelope of the gland, and in some instances, when they have become accidentally inflamed, the connexion has been evident to the touch. The identity of their intimate structure (with the exception of the non-existence of ducts), as proved by the microscope, to a certain extent favours the same view. All this, however, does not prevent the possibility of their being sometimes formed, as M. Velpeau suggests, in masses of effused fibrine, the results either of a blow, or of periodic congestion in persons of difficult menstruation. There is nothing impossible in such a transformation of plastic matter, although it is not in accordance with what is generally received by physiologists of the present day: the general belief is, that fibrine will not become organized into anything higher than areolar tissue, more or less condensed, unless there be a *point de départ* by actual contact with a higher structure, or at least by such a free vascular intercommunication as will allow of the peculiar elements of that structure being brought to the point where the fibrine is effused; as in the repair of bone, for example. M. Velpeau's arguments are too much *à priori* and speculative to be regarded as proving his view of the formation of these tumours.

We pass, however, with pleasure to the following passage, in which the diagnosis of adenoid tumours is laid down with great clearness:—"When we find a tumour in the breast of a young female, whether married or single, or of an unmarried female of any age, or of a married woman who has never been pregnant,—women whose health has been good or only occasionally disturbed by irregularities of uterine functions; if this tumour be of a size varying from that of a nut to that of a hen-egg, hard, elastic, a little uneven, generally indolent, perfectly movable, so as to be capable of being displaced in all directions among the tissues, we may venture to assert that it is an adenoid tumour. We may be almost certain if we learn that it is of long standing, and has appeared subsequent to a blow, or without appreciable cause; that it has grown slowly and without inflammation; that it has remained one or more years without notable increase of size; and that it is not the seat of either throbbing or lancinating pain. Our conviction may be complete if to all these characters it may be added that the tumour, although of old date, is not the seat of any fluctuation; that it preserves all its mobility without having contracted any adhesion, either to the skin, the subcutaneous tissue, or the structure of the gland, and that it is not complicated with engorgement of the neighbouring lymphatics."

The special diagnosis from cancer may generally be made with ease, when the tumours have existed for any length of time. The great mobility of adenoid tumours may distinguish them from scirrhus; the latter, even at its earliest period, has evident connexion with the gland, and often with the skin, by means of small radiating filaments; these may escape a careless observer, but are readily detected by drawing the tumour in all directions when the gland or the skin will follow it. The rapid growth of encephaloid and colloid cancers, and their globular form, suffice to distinguish them. Large adenoid tumours may ulcerate the skin, but they never become incorporated with it, either *en masse*, as scirrhus, or in points, as encephaloid. Cysts, when very small, may not present evident fluctuation, but in doubtful cases an exploratory puncture will solve the difficulty. Adenoid (like fatty tumours) may occur a second time in the same individual; but they do not, as cancers do, recur *in loco*, nor do they engage the neighbouring glands, nor disorganize surrounding structures. They sometimes disappear spontaneously either upon the occurrence of pregnancy, during lactation, or at the turn of life. Well-applied compression may sometimes arrest their growth. Repeated small bleedings, frictions with iodine or mercury, and similar means, may appear to have a like result, but M. Velpeau thinks that in such cases the tumour only participates in the general emaciation produced by the supposed remedies. Ligature is absolutely rejected; so are caustics; and excision is recommended only when the mind of the patient continues to be harassed by dread of cancerous degeneration. The operation has met with singular success in M. Velpeau's hands. He has collected the records of upwards of fifty cases upon which he has operated, since 1836, with invariable success. We have, however, seen fatal results from erysipelas after the operation, and would recommend our readers not to be led into operating unnecessarily; and in every case to place all the possible dangers fairly before the patient or her friends.

The second section treats of diseases of a malignant nature, or cancers of the mammary region:—

"In the breast cancer occurs under three principal forms, scirrhus, encephaloid, and fibro-plastic; which appear sometimes to be associated, but which most frequently, from the beginning to the end, preserve very dissimilar clinical characters; melanosis, keloid, and epithelioma are very rare in this situation." Scirrhus is divided into ligneous and lardaceous; ligneous scirrhus into partial parenchymatous or globular, diffused parenchymatous, radiating, tegumentary or in plates (en plaque, en cuirasse), pustular or disseminated (either in the skin or in the parenchyma), atrophic, and scirrhus of the lacteal ducts; lardaceous scirrhus into partial and diffused. These subdivisions are not very clearly made out. We select the most important and salient points as regards operation and prognosis. The tegumentary bears operation with least success. The atrophic belongs to old age, and progresses slowly if let alone. The pustular form is deceptive, as a primary affection it is rare,—acne would be a better name for it than ecthyma or pustule; it appears as disseminated little tumours like seeds scattered either in or under the skin; in their early stage more easily discovered by the touch; they are slow to suppurate; they frequently appear in or around the cicatrix of a former operation, and should be carefully sought for in the integuments prior to any operation for cancer; they also arise in the cicatrices of leech-bites, or upon any spot of cutaneous irritation; whenever they appear, they give grounds for the worst prognosis. Lardaceous cancer differs from ligneous in the larger amount of fat contained in its fibres,—it is consequently less radiating, larger, grows more rapidly, and leaves the skin longer intact.

Although M. Velpeau classes fibro-plastic tumours, chondroid and colloid cancers, among cancers, yet he allows it to be only provisionally. Of napiform, or fibro-plastic proper, he gives two examples only, in both of which the disease returned in distant parts. The cases occurred so far back as 1816 and 1823; neither the clinical history nor the appearance of the growths is given with such accuracy as to warrant us in acquiescing with M. Velpeau's conclusion, that these were fibro-plastic growths, much less that fibro-plastic tumours are cancer properly so called. His opinions upon the nature of colloid are thus summed up:—

"Colloid matter does not of itself absolutely indicate either the benign or malignant nature of the tumours which are composed of it. The colloid condition of cancerous tumours is in general only an accident, the result of an advanced phase of the disease; but there are tumours formed from the first of colloid matter, and which are not cancerous."

He is not certain of having ever seen epithelioma in the breast. Keloid he also classes among cancers, although he states that it encloses no cancerous succus.

Under the heads of diagnosis of the various forms of cancer from each other, and from non-cancerous tumours, much interesting and instructive matter will be found, but we are reluctantly obliged to pass it over.

With regard to pain as a special symptom, he remarks with great truth: "Nothing is so dangerous as to measure the benign or malignant nature of a tumour by the intensity or the absence of pain;" and again, "The absence of pain is so little reassuring, that encephaloid cancer, which relapses with so much obstinacy, is precisely the least painful of all."

Exudation from the nipple, which is set down by Richard as a sign of a non-cancerous tumour, is regarded by Velpeau in rather the opposite light, but as a sign it is worth nothing. The characteristic physiognomy he believes to be a late sign, and consequently of little value. On this point we are bound to disagree with him; the existence or absence of cancerous cachexia, taken along with the state of the neighbouring glands, is one of our most certain and useful guides in tumours of doubtful nature. What we should call the non-cancerous fibro-plastic tumours can often be distinctly diagnosed by these means. The error of classifying these as cancers has, doubtless, led to M. Velpeau's overlooking the importance of this symptom.

The following aphorisms give a brief expression to much that lies scattered through this chapter:—

"1. That no plausible reason has been given in favour of cancer as a disease primarily general." All debilitating influences, mental and physical, are rejected as causes. Its hereditary nature is allowed.

"2. That we should incline to consider it primarily as a local affection." If not a parasite, acting as such.

"3. That certain tumours of benign nature can apparently undergo malignant transformation." This resolves itself elsewhere into his having seen tumours occasionally which have become evidently cancerous, after having long appeared to be benign. He has also met with one case in which part of a tumour was adenoid and part cancerous. The first reason may be explained by error of diagnosis, as M. Velpeau himself explains it, when speaking of what used to be called occult cancer; the second fact weighs rather for the opinion that adenoid tumours are true hypertrophies of the gland than for the cancerous degeneration of simple fibrous or other innocent tumours.

"4. That both benign and malignant tumours, cancers and adenoid of the breast, recognise as probable cause exudations among the normal tissues, either plastic, sanguineous, or secretory, either of spontaneous origin, or from external violence."

"5. That the existence or non-existence of the cancerous cell in the tumours is not an irrefragable proof that the disease will or will not return after operation." This proposition will now meet with the cordial assent of all microscopists, as will the following, although it be an excellent specimen of a *non-sequitur*.

"6. That it would consequently be imprudent to decide, upon the testimony of the microscope alone, whether to operate or not."

"7. That observation and statistics are far from proving that the extirpation of tumours of the breast is always followed by relapse, and always useless, or even hurtful."

"8. That sufficiently numerous facts and observations drawn from my own practice incontestably demonstrate the possibility of radical cures (by operation) of suitable cases of cancer."

The attempt to cure cancer, as Recamier supposed, by compression, has been proved fallacious by Lebert and others. Velpeau adds the weight of his opinion against it. The most it can achieve is, to produce absorption of simple plastic exudation and to flatten the tumour. We fear the same must be said of Arnott's freezing plan, but the latter is deserving of some further trials. Of means to retard the growth of cancer Velpeau gives the palm to occasional leeching between the tumour and the axilla, and to the use of an ointment of the iodide of lead. The author presents us with an able comparison of the various caustics and specifics which have, from time to time, been vaunted for the cure of cancer; he approves of their use in certain cases,—as when the cancer is superficial and extensive, or disseminated, or ulcerated with considerable anfractuosities, or sending off distant roots; also in cases suited for excision when the patient dreads the knife, or when a return of the disease appears in and around a cicatrix; in doubtful cases, or lastly, as a palliative where the knife dare not be used. He prefers Vienna paste when the disease is not deep and not ulcerated; caustic potash or solid Vienna caustic for ulcers and anfractuosities. M. Canquoin's plaster, composed of one part of chloride of zinc to two of flour, he would apply to tumours which are of medium size and lobulated; this is a convenient application, as it will not burn the sound skin, and by regulating the thickness we can burn to any depth we please; it is horribly painful, because slow in its action. His favourite caustic is a paste made of sulphuric acid and saffron, which burns to any depth, dries, shrivels, and contracts the tumour, and if well managed will destroy the morbid growth; it is very troublesome from its lightness and from its burning everything it touches; the best mode of limiting it is with a layer of very thickly spread adhesive plaster applied all round the tumour. He sees no reason for preferring arsenic in any case.

We should like to give all the rules which are laid down as guides for the selection of cases for operation; we cannot do them full justice by an analysis, but their extent is too great for our pages. Scirrhus of the skin, whether in patches or pustules (acne), ought never to be excised; diffused scirrhus, whether ligneous or lardaceous, is in the same category, even if the skin and glands are still uncontaminated. The same remark applies to encephaloid, when diffused through the entire gland, or disseminated in points. On the other hand, partial scirrhus with retraction of the nipple and puckering of the skin, and radiating scirrhus, may be operated on even if the glands in the axilla are enlarged, provided these can be completely removed along with the tumours. Encephaloid also, whether ulcerated or not, even if there be fungous growths externally, and it be no longer rolling and movable, may be removed, as long as the tumour is solitary, and the viscera and general system appear uncontaminated. All cancers which grow rapidly are rapidly and infallibly reproduced, and operation only hastens the fatal termination. When a large portion of skin would require to be removed along with the gland, it is better not to meddle with it. When cancer occurs in both breasts he regards it as a sign of general infection. The existence of ulceration alone, or of great pain, is no argument against operation. Finally, "in doubtful cases be satisfied to say, that without operation the tumour will not be cured, while operation will give some chance of overcoming the disease, and leave the decision to the patient as much as possible." Most of these rules are good; perhaps a little too much law is given in favour of encephaloid, but we say this with hesitation, as we are more likely in this country to err on the side of caution. As to the operation itself, he prefers to preserve the nipple when possible, especially when the female is still young enough to nurse, and when a good portion of the gland is left. He endeavours to obtain union by the first intention when it can be done, and to leave the first dressings undisturbed for three or four days. These latter points may seem trifles, but books have been written on them in France, and angry passions raised. As preventives of relapse, he puts little faith in issues, and recommends occasional leeching, purgations, and alteratives, and frequent mucilaginous baths. Of the sapient proposal to syphilize the cancerous, it may be supposed he says little.

By attacking new growths at an early period, he has effected permanent cures after two or even three operations. Roux has done the same after six operations. There is no doubt that by judiciously using the knife again and again, persons may be kept alive for many years. He gives one case in which the lady has been five times operated on in the course of ten years, and is not much worse after the last operation than after the first. He has an hospital patient on whom he has operated seven times in six years, and who at present appears likely to be permanently cured. In such cases, each successive operation seems to give less constitutional disturbance.

Statistical Tables conclude the chapter, from which we extract some particulars:—

Scirrhus.—Ligneous, 48; diffused, 26; lardaceous, 21; radiating, 20; in patches, 5; disseminated, 5.

Of 197 cases, 57 were not operated on (besides many of which no note was taken). Removal or cauterization performed, 140; 70 cured or progressing to a cure when lost sight of; relapse in 22; erysipelas, 45 times; hospital gangrene, 7; 30 died,—21 of erysipelas, &c., 2 of exhaustion, 4 of cancerous infection.

Encephaloid.—62 cases: 45 operated on; 9 died of erysipelas, purulent infection, &c.; 20 went out cured; 18 relapsed; 18 had ulcerated cancers (how many of these 18 were operated on, and how many were cured, &c., is not given).

We have now concluded our analysis of this work of thirty years' growth, which gives to the world the experience, in an important branch of surgery, of perhaps the ablest living French surgeon. His observations upon this subject, as he tells us, amount to upwards of 2000, and he may well be permitted to speak *ex cathedrâ* upon it. But to no man is it given to be infallible; every one has their prejudices, and M. Velpeau is not without his. Himself an early favourer of microscopic investigation, with almost every page of his book bearing silent testimony to its value as a means of diagnosis,—alleging continually the microscopic character of the tumours he is engaged upon as proofs of the correctness of his diagnosis, he yet makes little of the labours of the many eminent men who have consecrated their energies to this department. He even endeavours to throw discredit upon M. Lébert, by insinuating that the facts upon which he has founded the conclusions of his work on cancer have been misstated. We have not a moment's hesitation in stating our firm belief in M. Lébert's truthful accuracy where facts are concerned; where theory or prejudice interfere with correctness of vision, there are few who will not be led astray by them. Perhaps M. Lébert theorizes too extensively, and with too much dogmatism. Certainly the prejudices of the old school still cling, perhaps unconsciously, to M. Velpeau.

We need not repeat here, what is doubtless familiar to most of our readers, Lébert's description of the general microscopic characters of cancer; it will be found by reference to vol. xiv. p. 179, &c. of our present series. Suffice it to say, that careful examination of some hundreds of tumours at the bedside, and by the microscope, has led Lébert to conclude (with others) that each morbid growth possesses a definite organization. *A priori* we should expect this to be the case. It is hard to believe that diseases which are so peculiar in their clinical features, as cancers for example, should not present peculiar anatomical elements, or at least such a peculiar arrangement of elements as to be recognisable by a practised eye. This is so palpable, so self-evident, that the most virulent opposers of the microscope cannot venture to deny its reasonableness. Surrounded by numerous and ardent microscopists, M. Velpeau is bound to give in an unwilling adhesion to this theory. The results (imperfect as yet, no doubt) he refuses to accept; for him the microscope has no indications which cannot be better obtained by careful clinical observation. He claims that *tactus eruditus* which is never mistaken, and asks triumphantly has the microscope ever proved him to be in error upon the nature of a given tumour. He forgets, and so do the despisers of the microscope in general, that to the comparison of previous microscopic examinations with the results of clinical history, they are largely indebted for acquiring this readiness of diagnosis. This is the true value of the microscope, as it is of the stethoscope, and of every other aid to clinical observation; and it is with this object in view that we entreat those who value the advancement of medicine and surgery as curative powers, to give all diligence to improve this addition to their implements;

and further, we urge those who are occupied with the microscope to join to it clinical observation of a peculiarly accurate nature, without which it is as useless as pathological anatomy on the large scale would be if regarded *per se*, and apart from symptoms and signs during life.

M. Velpeau not only endeavours directly to throw discredit on the microscope by denying that it has arrived at any valuable clinical results; he also puts forward many monstrous propositions, as if they were those of the microscopists, in order indirectly to injure their credit. His own theories are crude in the extreme, and most contradictory. Cancer is, "if not a parasitic growth, yet acting as such;" "the cancerous cell is a secondary product;" "cancer is a disease primarily local;" "cancer is the result of an abnormal exudation, drawn from the fluids of the economy." We cannot reconcile these opposite and contradictory statements, nor does M. Velpeau endeavour to do so. Each seems to be put forward without consideration, as an implement of the moment, for the purpose of combating some supposed error of the micrographers. Many of the opinions which are ascribed to them are of the most ultra nature, and such as were never held, unless indeed when the first flush of excitement led away the discoverers of new facts into the dreamlands of theory.

But we cannot conclude this rather extended notice of M. Velpeau's work without a word of praise to the publisher for the paper, typography, and beautiful illustrations which adorn the volume; as on previous occasions we have felt it our duty to testify, M. Masson's publications are in these respects deserving of much credit.

A Treatise on Hooping-Cough: its Complications, Pathology, and Terminations. With its successful Treatment by a New Remedy. By GEORGE D. GIBB, M.D., L.R.C.S.I., &c. London: Renshaw, 1854. 12mo, pp. 395.

HOOPING-COUGH is one of those diseases which has ever engaged much of the attention of physicians. The great interest attaching to it is, no doubt, ascribable to the obscurity of its pathological cause, the uncertainty of its course, and the impossibility of laying down any fixed and specific rules for its treatment. But it is equally certain that these very circumstances have tended to the production of a great many crude and worthless theories respecting the etiology of the disease; and to the publication of a host (the author enumerates about half a hundred) of alleged specific remedies for its cure. We cannot but regret, therefore, that Dr. Gibb should have incumbered his book by frequent reference to the works of nearly all the authors who have written on this subject. This materially increases the bulk of the volume, lessens its value as a "manual" or compendious guide for practitioners, and of course increases its price. It is a species of book-making, for which, in the present case, at all events, there was no sufficient excuse; whilst in effect it must circumscribe the benefit that might otherwise result from the publication of any original views which the author may entertain.

These remarks we make with all good-will and friendly feeling; but we deem it a duty incumbent on us, as censors of the current medical literature, to repress if possible this species of composition; and the more so as we find a superabundance of it at the present day. A great deal of time and labour is thereby turned into an unprofitable channel, and diverted from a more really useful pursuit. We are fully impressed with the opinion that the man who brings to light a new fact, or makes one original observation in the diagnosis or treatment of disease, is more deserving of our praise and respect, as a contributor to medical science, and a benefactor of the human race, than he who produces one of those laborious indiscriminate compilations, which seldom repay the reader for the time required in their perusal, and as guides in actual practice are almost valueless. A book of this description may indeed be "great," but this, in itself, is small claim to merit, as we have good authority for saying that "a great book is a great evil." Far be it from us to depreciate research, or discourage an author from availing himself to a certain extent of the observation and experience of preceding writers. It is the bounden duty of every man who sets about composing a treatise on any subject, to make himself previously acquainted with all that has been already achieved in the same field of inquiry, if he would wish to avoid falling into grievous blunders, and incurring merited censure and ridicule. Such research, then, is necessary for his own private benefit. But, furthermore, an author may, with advantage, occasionally borrow some of the facts or sentiments of his predecessors, introducing them for the purpose of illustration, or of elucidation, or of comment; but this is a widely different thing from a tedious and lengthy recapitulation of opinions and remarks well known perhaps, or, it may be, possessing no other claim to respect than that which they derived from the hands of the printer.

Although we have been led into these remarks by the book before us, yet we are far from wishing it to be supposed that they are intended to apply to it except in a mild degree. Of this Treatise we may, with all truth, affirm that it contains evidence of the most laborious and painstaking research. The author would seem to have quoted from, or alluded to, nearly every writer upon the disease of which he treats; so that the chief fault we find with the work is its copiousness in this way. He has, however, introduced some original views, partly his own, and to these we shall confine our criticism, they being the only parts of the book which can fairly be subjected to this ordeal. In justice to the author we should give an analysis of the general contents and arrangement of his book; indeed, there would be no excuse for omitting this, as we find it ready prepared to our hand in the Preface:—

"As the study of hooping-cough has occupied my attention many years, and entertaining some new views in regard to its nature and pathology, being also desirous of advocating this new remedy, of great value in its treatment, I have therefore prepared the present imperfect essay. The first chapter gives a brief summary of the minute anatomy of the lungs and their nerves, to assist in the explanation of the pathological phenomena of the disease. A consideration of its history follows, interesting to those in favour of its antiquity, and which, I believe, may be dated from an extremely remote period of time. The chapter on the mortality contains many accurate Tables of value upon the statistics of deaths in the metropolis, and in the whole of England, compiled from the volumes of the Registrar-General, and which have not before appeared in relation to the present disease. The general features of the disease are particularly described in the chapter on the symptoms; and all the complications which have ever arisen in the progress of the affection have had more than an ordinary amount of attention bestowed on them, and some of them are described for the first time. Following these is a chapter on the numerous terminations of hooping-cough, which contains many facts of interest. In the pathology of pertussis a solution has been attempted, which, from the plan adopted in carrying it out, may be received favourably. Most certainly, some points in connexion with it are set at rest, and a careful perusal of the chapter upon it, together with the one following on its nature and seat,—in the latter of which this question is summed up,—will be necessary to fully comprehend the conclusions arrived at." "The assertion that pertussis is a disease of all climates is for the first time practically considered in a separate chapter, and the evidence adduced to prove this is of great value indeed." "Not less than three chapters have been devoted to the consideration of the treatment recommended by almost every writer; the work would have been incomplete without these, and no apology is necessary for their introduction. Chapter XVIII. contains a description of the treatment of the simple affection by the new remedial agent, with cases; together with remarks upon its general utility; and the following and concluding chapter refer to the treatment of the various complications."

Such, then, are the contents of the book, as described in the author's own words; and if we make due allowance for the natural partiality of a parent towards his own offspring, the above may be taken as a fair representation. As already intimated, we shall now pass in rapid review those passages or parts of Dr. Gibb's work which seem to possess any pretensions to novelty; dismissing all the rest with this one general observation, that, though supplying the fullest information even to minute points, the author has in a great measure avoided that tedious prolixity which too often distinguishes mere compilations, rendering them dry and wearisome to the reader.

The existence of any *physical* sign of hooping-cough has been frequently made the subject of diligent investigation. Dr. Churchill tells us he examined a great many children at intervals between the paroxysms, and in a great many cases he found that after the chest had been cleared by the last cough, the respiratory murmur was louder and more rough than usual; nay, in some cases that it had a rather loud brazen sound, something resembling a loud sonorous rale. Dr. Gibb now acquaints us he has frequently satisfied himself of the presence of another sign. It is this:—

> " On applying the stethoscope to the jugular veins on either side of the neck, immediately after the paroxysms have ceased, a distinct musical murmur is heard, more marked on the right side than on the left, which disappears again when the circulation and respiration have become tranquil, to reappear each time on the subsidence of the paroxysms."

Here, then, if these observers be correct, we have *two* physical signs; one present immediately on the subsidence of the paroxysms, and the other during their intervals, that are calculated to aid materially the forming of our diagnosis, in obscure or doubtful cases. Our own experience does not enable us to pronounce an authoritative opinion upon these points; but we strongly commend them to the attention of practical men.

A great deal of consideration is bestowed on the pathology of pertussis, and the opinions of upwards of *ninety* authors and writers have been made available towards the elucidation of this interesting question. Dr. Gibb concludes this part of the subject by giving a statement of his own views on the matter, chiefly based, it would appear, upon the observations of Drs. Ogier Ward, Todd, Copland, Pidduck, Sanders, Laennec, and Carpenter. These conclusions we shall give in the author's own words:—

> "1. Toxication of the blood produced by some unknown specific influence peculiar in its nature, not unlike that of measles and scarlet fever in the circumstances of its affecting persons once during their lives, generally children under five years of age.
>
> "2. Irritation of the terminal loops of the nerves supplying the mucous membrane of the bronchial tubes, producing vascularity and consequent secretion of a greater or lesser quantity of mucus.
>
> "3. Reflex action of the pneumogastric and respiratory nerves, followed by congestion of the vessels of the medulla oblongata and pia mater surrounding it, and also at the origin of its nerves.
>
> "4. Spasmodic contraction of the circular and longitudinal muscular fibres of the bronchi, consequent upon the foregoing, manifesting itself in the series of sudden expiratory efforts, and the well-known sonorous back draught or hoop.
>
> "5. The immediate result of which is frequent and rapid respiration, to compensate for its temporary absence, producing a highly oxygenated or super-oxidized state of the blood, with a tendency to the formation of fibrinous concretions in the heart during the spasms.
>
> "6. As a secondary result of the spasmodic muscular contraction of the bronchi,—we have a temporary hypertrophy of the muscular fibres thus acted upon, which disappears again after the cure is established.
>
> "7. The disease is at first irritative and catarrhal, and afterwards nervous and spasmodic, both due to the unknown peculiar exciting cause present in the blood.
>
> "8. It manifests the peculiarity of running a special course through its different stages, three in number, but which may be cut short or greatly diminished by medicinal treatment."

Dr. Gibb has been at considerable pains to ascertain how far hooping-cough is diffused over the globe. He freely avows his own conviction that it is a disease of almost every habitable portion of the world, but we do not quite think the evidence sufficient to bear this out, although rendering it highly probable. However, he has brought forward ample proof of its existence in every degree of latitude, from the torrid zone to the icy regions some degrees north of the arctic circle; and this in itself is an important fact to establish, as showing that *temperature* has little, if any, influence in the production of the complaint.

Three chapters (xv. xvi. and xvii.) are occupied with an enumeration of the various remedies,—upwards of *seventy* in number,—which have been from time to time proposed for the cure of hooping-cough. Some detailed account is given of forty-three of these respectively, but the remainder are merely mentioned by name.. Having given this condensed summary, which seems in every way an impartial and honest representation, our author next introduces to our notice, in the eighteenth chapter, *the* remedy which it was the primary object of this Treatise to make known. Passing by the theoretic considerations which he indulges in with a view to explain the exact *modus operandi* of this remedy in the disease, and its peculiar adaptation thereto, we shall just quote here those passages wherein its form of administration, dose, and other practical details, are laid down. In the Preface we are informed that for the knowledge of this therapeutic agent in hooping-cough the author is indebted to Dr. Arnoldi, of Montreal, who was the first to use it in the treatment of this disease. After quoting an observation of Dr. Todd to the effect that if we could find some material, which, when introduced into the system after it had received the poison, would neutralize that poison, then we should have the same power over this malady as we now possess over intermittent fever,—the author proceeds:—

"It would be presumption in me to say that this substance has been discovered, but in its effects upon the disease, *nitric acid*, in whatever manner administered, not only arrests the paroxysms and removes the hoop, but shortens the disease almost as effectually as quinine does intermittent fever."—"As a general tonic nitric acid possesses the advantages in pertussis of rapidly allaying the dyspepsia, which is sometimes accompanied with sickness and irritability of the stomach. It restores the healthy state of the mucous membrane of the bronchi, it arrests the spasm, diminishes the cough, and finally dispels the hoop altogether. Dr. Arnoldi and myself have never met with any ill effects from its use, and all the cases treated by it were carried to a successful issue, the cure in all being very speedy, with few exceptions, and the disease being at the same time abridged in the length of its ordinary duration. So far as experience has shown, relapses after cure are very rare indeed. Should inflammation of the lungs or abdominal organs have set in previous to its employment, it must be avoided, and the treatment must be adopted as recommended for those complications in the next chapter. But if we have to fear congestion of the brain or convulsions, the acid may still be safely given, and with good results, for the purpose of lessening the paroxysms. It will also prove useful in the remittent fever, combined with other substances, if there be no existing irritation."—"My friend, Dr. Arnoldi, has treated upwards of one hundred cases of pertussis with nitric acid, with the most satisfactory results, and since I commenced its use, sixty-seven cases were cured at intervals varying from two to fifteen days, but averaging from six to seven days."

Several cases are related, confirmatory in every respect of the above statements. This mode of treatment has been employed, it would seem, with patients of every age, from a few months to many years, and with pretty nearly equal success in all. To prevent injury to the teeth a carbonate of soda gargle was used immediately after each dose. Dr. Gibb's formula for the use of the acid for children under two years of age is as follows:—Dilute nitric acid (*Phar. Lond.*), twelve drachms; compound tincture of cardamoms, three drachms; simple syrup, three ounces and a half; water, one ounce; mix:—or this may be varied by the addition of some compound tincture of gentian and honey, the strength of the mixture remaining the same. Of either of these the dose is a dessert-spoonful every hour or every second hour; but for a very young infant the dose is only a teaspoonful. For children from two to five years of age the quantity of acid is increased to fifteen drachms (for an eight-ounce mixture). Whilst employing this acid treatment of hooping-cough, Dr. Gibb very properly does not exclude the use of corroborative means, both medical and hygienic. Thus, if we see the disease in a plethoric child, with much congestion about the face and neck during the fits of coughing, he advises our applying one or two leeches to the back of the neck; if much wheezing be present, he gives a mild emetic of ipecacuanha every morning, to unload the bronchial tubes. In like manner, if there be congestion of the lungs, the acid may be stopped, and leeches applied to the chest; though this, he asserts, was never found necessary in the course of his experience.

Such, then, is the nature of the evidence in favour of this new agent for curing pertussis. That it may prove a valuable addition to our therapeutic resourse in its treatment, when uncomplicated and past the catarrhal stage, we cannot reasonably doubt; but that future experience will place its claims to the rank of a specific on an equality with those of quina in intermittent fever, is quite beyond our most sanguine expectations. For we cannot overlook the fact that many other remedies, especially cantharides, were originally recommended in the same confident tone; but unfortunately the voice of general experience has not at all confirmed the high character with which they came before the profession. It may be,—and this we merely throw out as a suggestion,—that hooping-cough (like all the other diseases of the exanthematic type) varies from time to time in morbid character, and especially in its amenability to treatment; so that the remedy which is eminently successful for its cure this year may prove a signal failure the year following.

We now take our leave of Dr. Gibb, assuring him of our deep respect for the erudition and research displayed in his Treatise ; and thanking him for the positive addition he has made to our knowledge. But at the same time we feel bound to reiterate our conviction that he might, for all really useful and practical purposes, and with more advantages, have brought his views before the profession in a smaller and cheaper, though perhaps less pretending form.

Traité de l'Epilepsie ; Histoire, Traitement, Médecine Légale. Par le Dr. Delasiauve, Médecin des Aliénés epileptiques de l' hospice de Bicêtre. Paris: Victor Masson. 1854. 8vo, pp. 559.

This is a very elaborate and carefully executed treatise, the result of a long series of practical observations conducted in an extensive establishment, where the author has had ample opportunities of testing opinions, recording useful facts, and ascertaining the relative value of different modes of treatment. The work consists of three parts, the first of which comprises the history of the disease, symptoms, causes, prognosis, &c.; the second, the treatment; and the third, the medico-legal considerations naturally arising from the peculiar condition in which patients of this class are placed.

The history opens with a chapter on the synonymy of the affection, containing some very ingenious speculations as to the origin of many of the terms used at various times in designating this disease.

The next chapter is devoted to the definition of epilepsy. The author combats the old opinion maintained by so many writers from Hippocrates downwards, namely, that the abolition of sensation is an essential ingredient. That the idea of a "fall" should serve as an element of the definition, he refuses to admit, as this is to be observed under many other circumstances, for instance, in syncope, catalepsy, apoplexy, &c. "In fine," he adds, "and without attaching an exaggerated value to a distinction perhaps too subtle, we may admit that epilepsy has for its essential stamp (*cachet*) attacks usually sudden and rapid, with or without fall, in which the abolition of the intellectual and sensorial faculties is almost always complete, and is associated with contractions and convulsive shocks more or less generalized."

Regarding the nature and seat of the disorder, many ingenious theories are quoted, canvassed, dismissed; and the chapter is closed with the following remark:—"Thus we see that neither the nature nor the seat of epilepsy is positively known,—hardly is it even suspected. In this double relation, science is still groping her way, feebly guided by the lights which this part of the subject has received from the genius of the ancients and the investigations of the moderns."

The author adopts the following as the primary classification:—1. Essential or idiopathic epilepsy, manifesting itself solely by functional deviations without lesion, and constituting, in fact, a true neurosis. 2. Symptomatic, depending on a cerebral lesion, more or less appreciable, the convulsive spasm being here the symptom, not the disease. And 3. Sympathetic, produced by irradiation of abnormal impressions, which have their seat in other parts of the body than the encephalon or its appendages.

In the fifth chapter we have a long account of the symptoms which precede an attack, to which is appended a summary of "facts." This extends to 519 observations, of which 220 are quoted from various authors, and 299 are personally collected. On this total, in 255 the symptoms at the commencement have not been noted, viz., for the first category, although the less numerous, 130 times; for the second, 125. This difference is explained by stating, that "the physicians who witnessed the examples of epilepsy had not proposed to themselves, except in some exceptional cases, to inquire specially into the initiatory phenomena."

Making allowance for the 255 cases in which no precursory symptoms were observed, there remain but 264; and in 101 of these the attacks have been sudden, while in 183 the premonitory symptoms were capable of being verified. Now, the sum of these two numbers exceeds 264, but the apparent inaccuracy thence arising is accounted for. "We have seen," he remarks, "there are some remote precursory signs (prodromes éloignés), which do not of necessity exclude the suddenness of the seizure; and the simultaneous manifestation of this double circumstance in the case of several patients must account for the marked difference in the figures."

According to the preceding data, and contrary to the opinion more commonly received, the attacks with precursory signs would appear to be about one-third more numerous than the sudden invasions. We can understand, nevertheless, that such a proportion would require to be supported by new and carefully conducted investigations.

The precursory phenomena themselves are thus divided:—

1. Immediate	in	150 cases.
2. Remote	in	35 ,,
3. Occurrence of both	in	12 ,,
4. Remote signs and sudden attack	in	18 ,,

Among the 150 patients who presented signs of *immediate* premonition, 59 have been able to call persons to their assistance, or to assist themselves directly, whether by removing from dangerous places or by sitting down or lying down; 49 have been quite powerless in both these respects; 9 have succeeded only occasionally in helping themselves; respecting the remaining 33, observation is wanting.

The assistants have often distinctly perceived certain prodromic accidents in two patients, of which they themselves had no consciousness whatever.

In order to give some idea of the very varied aspects which the premonitory symptoms are susceptible of assuming, the author has grouped the cases together under a certain number of heads, by which the relative frequency of each symptom may be easily perceived. The classification which he has adopted here is not, perhaps, altogether free from objection; it has, however, the advantage that it involves no theory as to the cause of the various sensations, being simply based on the topographic relations of the several phenomena. Thus, we have the various premonitory signs arranged according as their seat may be in the head, the thorax, the abdomen, or the extremities; other signs having some peculiarity of character of a special, indeterminate, or even eccentric nature, are made the subject of three more heads,—the first consisting of general and undefined sensations; second, evincing some affection of the genital organs; third, presenting exceptions and anomalies.

The symptoms accompanying the immediate attack, in accordance with the wide range which the author has provided for in his definition, are found to vary so much in intensity, quality, and duration, as to authorize a division of the disease, in this respect, into several species, or rather gradations. He recognises four degrees of epileptic manifestation,—absence; vertigo; intermedial attacks, falls; or complete attacks.

In the first and slightest degree (absence), the patient is suddenly deprived of consciousness, and remains in this state during one or two seconds; he stops short in the middle of a sentence when speaking, or suddenly ceases to pay attention to what is spoken, should any one have been addressing him; when walking, the patient as suddenly stands still. "This momentary interruption frequently escapes the notice of the attendants, and even of the patient himself, for, on recovering his self-possession, he often resumes a sentence at the very part where he had so abruptly broken off," &c. Serious accidents, however, may result even from this slight degree of derangement, this transitory eclipse of intellect, should the patient be in a situation of danger.

The second degree of epileptic attack, designated "giddiness" (vertiges), is thus described:—"We shall apply the term to all those cases in which, to a momentary loss of consciousness, or to an absence of variable duration, are superadded slight convulsions, which are rapid and generally very partial." For the most part individuals who are subject to attacks of this kind recover from the fit without further bad symptoms, and appear to be as well as if nothing had happened. Occasionally the attack is followed by a state of sensorial incoherence, an uncertainty of purpose, or even a degree of insane violence. According to the observations of Dr. Delasiauve, and contrary to the opinion of M. Beau, who believed this latter state to be an essential element of the affection, it is only produced exceptionally, and not in any case until the disease has lasted for some considerable time.

The intermedial fits (accés intermediares), or third kind of epileptic manifestation, differ from the first two only in degree, and are to be distinguished from them not so much by the nature of the spasmodic movements as by their intensity, extent, and duration.

It is interesting to find special notice taken of one symptom, namely, the peculiar scream or cry said to be uttered by many epileptic patients on the coming on of a fit, and which formed the subject of an important dispute in a late criminal trial in this country[a]. "This initial cry is seldom heard, but M. Herpin appears to us to have gone too far in asserting that it is altogether foreign to the intermedial fit. We have in similar cases met with this cry at the beginning, sometimes shrill, and sometimes hoarse, with several of our patients, and it has been even repeated in some cases during the whole continuance of the fit." The author remarks regarding the acute sub-delirium mentioned by M. Beau, as supervening to the vertiginous form of the disease, that it is very often observed in the present species, and likewise a degree of stupidity or somnolence, which passes at length into sound and prolonged sleep."

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[a] Reg. *v.* Kirwan, Dublin Commission, December, 1852.

The fourth and last kind of seizure (chutes—attaques ou accés complets) is considered as constituting the type of the fully established disease, of which the second and third degrees just spoken of were only "feeble shadows and, as it were, abortions." Great stress is laid on the duration of the paroxysm, as one of its essential characters, this period being stated as rarely shorter than two minutes, and never longer than five, M. Tissot's statement regarding the prolongation of the paroxysm to ten minutes being considered an exaggeration. Further on, however, the author adds, "The attack in reality terminates at the moment when the respiration has recovered its freedom, and when the muscular spasms have quite ceased, for with many epileptics the fit remains circumscribed and confined, as it were, to the essential symptoms, namely, fall, loss of sense, convulsion."

Here the initial scream or cry has been observed in so many of our author's cases that he considers it a most important character of this species. He describes it as more shrill and stridulous, as well as more prolonged, than when it occurs at the starting point of the slighter forms of the disease.

The fifth chapter closes with a lengthy dissertation upon the "theory of the fits." Here we expected to find a full development of Dr. Delasiauve's own views on the matter, but after the most attentive perusal of these six pages we have not succeeded in arriving at any definite solution of the question suggested by the title of this section. True, he has given a full analysis of the peculiar doctrines advanced by Boerhaave, Tissot, Beau, Billod, Herpin, &c., concerning some of the more constant phenomena of the fit, but we should have expected that in summing up his account of the symptoms he would have defined his own views on the subject.

The sixth chapter is devoted to the consideration of the *progress* of the disease. Regarding its periodicity, accurate observation of numerous cases has established the fact that, although in the great majority of epileptics, the paroxysms observe no regular periodic law, no fixed rule of recurrence, yet cases have not been wanting in which an evident periodicity could be traced, and in which the return of the paroxysms at regular intervals was so remarkable as to suggest a resemblance in these cases to those of intermittent fever. Our author wishes here, however, to make a distinction which applies indeed not only to epilepsy but to all those affections in which this mode of evolution is to be met with. "Often," he says, "the pathological progress is thus subject to mysterious alternations, upon which, however, no significant or positive induction can be based. The fact of a regular succession is apparent and well established, yet from this we cannot draw any conclusion. With certain patients, on the contrary, this periodicity establishes, and, as it were, propagates itself, and becomes, moreover, an important basis of treatment." . . . "Not only does this affection assume frequently the usual type of intermittent fevers, but it sometimes replaces or succeeds them; or when it has been suspended by the accession of the latter, which has happened in some cases, it is reproduced on the disappearance of the fever."

With reference to the frequency of the accessions, the following return is stated by the author as the result of careful observations made by himself on 110 epileptics, in the majority of whom he was enabled to watch the disease during several years:—

Fits recurring almost daily, in	9 cases.
„ from two to six days,	42 „
„ once in a week,	20 „
Fits oscillating between ten and fifteen days,	9 „
„ between fifteen days and one month,	9 „
Fits recurring longer than a month, with very irregular intervals,	21 „
	110 „

The numerous variations in the progress of epilepsy are treated of at considerable length, and illustrated by a copious selection of cases, some of which have been personally observed, others quoted from various sources. These we must pass over, and come to the next and final section of this chapter in the history of the disease. This section treats of the various circumstances whose concurrence with the morbid predisposition, whatever that may be, has a tendency either to hurry on, to retard, or even to suspend the attacks. Those circumstances, which exercise a modifying influence on the progress or development of the disorder, are distributed into three categories, according to whether they are (1) inherent in the patient; (2) arising from the natural condition in which he is placed; or (3) depending on the more particular influences which exercise, externally or internally, some specific action on the economy.

In speaking of menstruation he says:—"Not only does this exercise a considerable influence on the phenomena of epilepsy, but the latter, in turn, reacts on menstruation, especially on the period of its initial development; thus, among eighty-two young women who had been previously epileptic, the mean age at which this secretion became established was sixteen years." In endeavouring to estimate the effect of pregnancy, some curious and contradictory facts have presented themselves: thus, some epileptic women were free from fits during the entire continuation of gestation; others only during the early or the later months; others again were exempt from attacks while carrying male fœtuses, and subject to frequent fits with females; while in some the very reverse of this was observed. To the cases which are cited in illustration we must refer our readers.

Notwithstanding the great amount of labour the author must have expended in collecting and arranging the materials for the chapter on the Pathological Anatomy of Epilepsy, his conclusions are expressed with a degree of caution and reserve which tends but little to clear away any of the uncertainty which hangs over this part of the subject. A large number of cases are quoted, which, for convenience of reference, are arranged in three series: in the first we have an abstract of one-and-twenty observations of cases in which there was a *total absence of lesion;* in the next group are forty-three characterized by *significant lesions;* and in the third set of observations, thirty-one in number, the lesions are represented as *equivocal.* How uncertain, after all, is the light thrown upon this singular disease by the results of cadaveric inspection! In a great many instances in which the patient has been carried off by some accidental affection, "neither brain nor spinal marrow exhibited any appreciable alteration; or else, those which were met with, inconstant and of little significance, are either common to other pathological states, or such as plainly resulted from the disturbance which the continuance of the disease brought about."

Regarding the hereditary transmissibility of epilepsy, some interesting remarks are to be found in the opening section of chapter IX. The observations which the author has made, and which are quite in accordance with those of Leuret and Beau, would seem to restrict the sphere of this cause within narrower limits than many would perhaps be disposed to allow. We shall quote his "result of 300 personal observations:"—

Absence of hereditary indications, in			167 cases.
Formal declaration of its non-existence, in . .			120 ,,
Presumed heirship,	3 mothers, 1 brother, 1 aunt,	Epileptic, . . .	5 ,,
Nervous affinities,	2 uncles imbecile, 1 brother idiotic, mother subject to convulsions, brother predisposed to same, 2 mothers hysterical, 1 aunt deranged,		8 ,,
			300 ,,

In addition to these, the author has collected from the works of various observers 221 supplemental cases, a review of which tends to corroborate his views.

Passing over the other constitutional causes connected with age, sex, temperament, &c., the remarks upon which do not offer anything very salient, we come to the causes of hygienic origin, among which are classed all that relate to those external circumstances which are susceptible, in a more direct manner, of modifying the play of the organs, and specially that of the nervous functions.

Seasons, atmospheric vicissitudes, and peculiarities of climate, although exercising a special influence on the *progress* of the paroxysms, do not appear to play any great part in *originating* the disease in question.

Touching sexual enjoyments, we think our author is disposed to attribute to this cause rather more than its own share in the production of the disease. "It is not without reason," he says in the preface to this section, "that Sennertus has defined the venereal orgasm '*Epilepsia brevis.*'" He then goes on to notice the observations of Sauvages, Tissot, Van Swieten, and specially Billod, who has related two remarkable instances in which epilepsy owed its first development to this cause; but it should be taken into account that in one of these cases the patient was exhausted by excesses (dejà épuisé d'excés), and had recently received a blow on the head[a]. Quite another matter, however, is the abuse of this propensity, and that unhappily too prevalent vice, the onanism of Tissot. Our author's observations on the baneful effects of this habit coincide with those of most physicians of experience, and yet, in summing up his cases, he says—"In about 200 instances this solitary vice has, without acting always in a direct manner, conduced, in an efficacious and certain way, to the production of epilepsy in 25 cases."

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[a] Billod, Annales Médico-Psychologiques, tom. ii.

It is difficult enough, however, to appreciate with accuracy the influence of a cause whose existence is so general, as the great discrepancy in the statistical results obtained by several observers will show; thus:—MM. Bouchet and Casauvieilh trace the origin of epilepsy to masturbation in 3 cases out of 77; M. Beau, in 1 out of 273; M. Herpin, in 1 out of 27; while M. Leuret, from among 67 cases, attributes 12 to this cause.

Unlike the preceding causes, which may be considered, for the most part, to have a chronic or persistent action, and therefore be more likely to influence the *progress* of the disease,—physical and moral impressions, owing to their more palpable and immediate nature, their transient character, as it were, are found to have a much more marked effect in originating an epileptic state; or, at least, in calling it into action. In illustration of this fact numerous cases are adduced, and these are arranged in a condensed or abstracted form, comprising a series of 41 observations of physical, and 87 of moral impressions.

Among the pathological causes are arranged irritating and poisonous agents; suppressions, excessive discharges; menstruation, pregnancy, and childbirth; defects of conformation; various diseases, &c. On turning to the section upon toxical agents, we find that saturnine epilepsy has been "learnedly elucidated" by Stoll, "described with great care, even to the most minute particulars," by M. Tanquerel des Planches; illustrated by a "great number of observations" by M. Martin Solon and others, and "made the subject of an inaugural thesis" by M. Bernard de Montessus; but we do not find any notice of the peculiar symptoms so well described by Mr. Harrison[a], of Manchester, namely, the cerebral excitement which he describes as so nearly resembling that of delirium tremens, and also the prolonged coma which precedes this state, and is so different from the coma of ordinary epilepsy.

In the chapter on prognosis we have the various opinions of a host of authors, exhibiting a great deal of diversity, but all more or less vague and unsatisfactory, especially when we try to appreciate the value of the very general terms in which many of these opinions are stated; for the presumption of suc-

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[b] See Observations on the Effects of the Contamination of Water by the Poison of Lead: by J. B. Harrison; a review of which appeared in vol. xv. of our present Series.

cess, or the reverse, must necessarily vary in the case of each patient, and this variation may depend on a great many circumstances concerning which it is not easy to generalize. Boerhaave, with his usual brevity, has in three axioms prescribed a rule for the prognosis of this affection, which appears to us as free from objection perhaps as a general rule can be:—“ Hereditary epilepsy is not to be cured; idiopathic is rarely cured; sympathetic is frequently cured.”

We pass on to the second part of the Treatise in which the important subject of treatment is very fully considered. This part opens with a chapter on the history; next are introduced some cursory remarks on the therapeutic indications: after which comes a very long chapter on the various methods of treatment.

Our author considers the debilitating treatment (bleeding, warm bath, &c.) as useful only in an indirect way by obviating cerebral congestion, and moderating the activity of the general circulation; it also tends, in some degree, to create a disposition which is favourable to the action of other remedies. Evacuants (emetics and purgatives, blisters, cautery! antimonial frictions! &c.) are of use in a similar way, as accessories. Tonics, used with great benefit in exhaustion of vital energy (épuisements), and in certain forms of cachexia; but with the exception of quina and ferruginous preparations, quite destitute of specific properties. Sedatives, on the contrary, occupy a large place in the treatment of epilepsy, appearing to enjoy some degree of specific virtue in many instances, independently of their general calmative property. Valerian—without assuming the pre-eminent position assigned to it by M. Tissot, this substance “ preserves, at all times, a high rank.” Its partial loss of character is attributed to the concurrence of other medications, which in some way have not allowed a sufficiently persevering trial to be made with it. “ Many practitioners have used it exclusively. One of our most celebrated colleagues, M. Téallier, has told me that he cured three patients with the simple decoction of valerian, given regularly morning and evening, during two or three years”! Assafœtida, less powerful than valerian, but, doubtless, capable of moderating the intensity and the frequency of the fits, especially when hysteric complication is present. Artemisia, deserving of particular attention, and worthy of being made the subject of new experiments; its action is described as instantaneous, and by no means transient. Many authorities (chiefly German) are quoted, who give favourable testimony of this remedy. Camphor, “ too much neglected.” Although possessing no very evident special influence in epilepsy, it, nevertheless fulfils a valuable indication in many cases, owing to its antaphrodisiac properties. Ammonia, represented as most valuable, principally on the authority of M. Lemoine; the mode in which it is recommended to be administered is not by inhalation, but diffused through some bland liquid, and taken internally.

Within certain limits the utility of the preceding remedies appears incontestable; others there are whose efficacy is but doubtful, notwithstanding they have enjoyed considerable credit. Thus, opiate preparations are, in general, hurtful, and only agree with a few exceptional cases. Preparations of copper have produced, in the hands of the author, results which he represents as "isolated, slow, suspicious." Indigo and nitrate of silver he has nearly laid aside. With sulphate of quina, which had excited such sanguine hopes, he has not succeeded in proportion, under the circumstances of periodicity, in which it would appear that its efficacy might have been pretty constant.

Regarding the combinations of medicaments, and how far we are justified in associating several remedies in the treatment of a single case, the author asks:—"What law, what rules, preside over these combinations? Generally speaking, the actual tendency in medicine is to simplify prescriptions. In transgressing this salutary principle in cases of epilepsy, by continuing to complicate our prescriptions, is it not to be feared that, in place of a clear and appreciable result, we are apt to effect the neutralization of one agent by another? One should doubtless, by such a combination propose to himself, as it were, some rational end; to join, for example, to the ordinary means suppose antiphlogistics to diminish a state of plethora or congestion; evacuants to obviate accumulation of depraved secretions; camphor to appease sexual irritation; quina, or anthelmintics, according as periodicity or verminous complications may demand; in this way we fulfil an intelligent indication, and act with double force upon the disease. Unhappily, in a similar case the physician is too often influenced more by mere caprice than by a rational calculation."

The proper limitation of the doses is considered a matter worthy of the greatest care and delicacy. The system of progressive increase in the dose is generally adopted, commencing by very small quantities and advancing gradually to the limit, beyond which we cannot pass with safety or impunity. "In certain cases, however, for example, in making use of belladonna, we are obliged," says the author, "rather to diminish the dose, if not to suspend its use altogether. Add to this, that according as the attacks become less frequent, the necessity for energetic treatment diminishes also. Many physicians lower their scale of doses in proportion to the lengthening intervals of the paroxysms." Thus, M. Téallier, in the cases already alluded to, had reduced the quantity of infusion of valerian by degrees to two glasses per diem.

How long should we persevere in any particular treatment when a case proves obstinate, or have we any index as to the period when further efforts in the same direction should be abandoned? Several cases adduced by the author tend to prove, with regard to this question, that, although it might appear irrational to persist very long in using any remedy which was obstinately barren of effect, yet very often the disease, after having remained for a long time almost stationary, in spite of treatment, suddenly undergoes a favourable modification; in other cases even an apparent aggravation during the earlier periods of treatment is soon succeeded by a sensible amendment. On the other hand, we should not lose sight of the fact that an almost unexpected alleviation of the symptoms may give place to a violent, and sometimes a fatal aggravation of the disorder.

By no means second in importance to therapeutic measures are the various hygienic influences to which attention must be directed in a disease of such chronicity as epilepsy; these matters form the subject of a long and interesting chapter, which, however, does not easily admit of condensation; we must, therefore, refer our readers to this and the final chapter on the treatment during the actual fit, appended to which he will find a copious list of formulæ.

The third and concluding part of the work treats in a succinct manner of the various medico-legal relations of epilepsy. When we consider that, in certain cases this disease merges in confirmed mental alienation, and that, even in the absence of complete insanity, this infirmity has a very general tendency to modify the character, habits, and moral sentiments of its unhappy possessor,—we can easily conceive how it may give rise to acts as reprehensible, inconsistent, or mischievous, as any that accompany the presence or development of mental alienation, from whatever cause. Besides this, it may render one incapable in some degree of discharging certain obligations and duties imposed by the rules or customs of social life; and in several other points of view may the subject be considered. Thus, legal responsibility; separation; interdiction; civil acts, contracts, wills; marriage; appearance as evidence in court; simulation:—each of these is made the subject of a short chapter. In constructing this valuable appendix to modern legal medicine, our author has freely availed himself of all that was useful in many of the treatises which exist on the subject, and appears to have been largely indebted to that of Mahon, as well as to a recent brochure of M. Boileau de Caselnau[a].

We must now close our observations on this Treatise. Considering the amount of the author's practical experience in a difficult and imperfectly known disease, it is written in an unaffected and liberal spirit, appreciating fairly the opinions and conclusions of others, and using, perhaps, too much caution in the expression of his own.

A Treatise on the Acute and Chronic Diseases of the Neck of the Uterus; with numerous Plates. By Charles D. Meigs, M. D., &c. Philadelphia: Blanchard and Lea. 1854. 8vo. pp. 116.

The American Medical Association at its meeting at Charleston appointed a Committee, consisting of Drs. Meigs, Channing, and Yardley, to draw up a Report on the diseases of the cervix uteri, which the Committee left to Dr. Meigs, as Chairman. This Report appears in the last volume of the Society's Transactions, and also, with the consent and approval of the Publishing Committee, has been issued by Dr. Meigs as a separate volume. It is illustrated by numerous coloured plates, most of which are very beautiful and graphic, and, like all Dr. Meigs' productions, it is marked by great experience, but, we must say, disfigured by his love of learned and recondite language.

After some sensible remarks on the mode of examination, the author proceeds to describe what he terms an ideal womb as a standard of comparison, together with its position *in situ*, anatomical relations, &c., and then enters upon the consideration of leucorrhœa. Vaginal leucorrhœa he thinks frequent, but neither excessive nor of much consequence: it is only when the discharge proceeds from the canal of the cervix that the constitution suffers. The author's pathology, however, is somewhat behind the present state of our knowledge; but his observations as to the means of diagnosis are sound. If we can cure the disease without an examination, so much the better; if not, "when the touch gives sufficient information, let the touch suffice: but if any doubts as to the wants of the case remain, then a microscopic examination should be made. If declined, let the consequences rest with the patient,—the physician is absolved from blame."

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[a] De l' Epilepsie dans ses Rapports avec le Médecine Judiciare, 1852.

When speaking of the treatment of erosion of the cervix with hypertrophy, by nitrate of silver, Dr. Meigs divides the application into three degrees,—the indifferent, the antiphlogistic, and the destructive,—according to the intensity of the application; and he considers that our success depends upon our applying it in that degree exactly which the case demands. For example, in the "*framboisèe*" inflammations and hypertrophies of the cervix,—

> "A proper and resolvent contact of the crayon ought not to destroy even this delicate epithelium, but rather to make it more firm and tense, and so planish (!), as it were, the unevenness down to the normal surface level. In this way we may compel the drusy (!) or tubercular eminences to sink down to their place, and by solidifying the epithelium give a firm physical delineatary support to the before debilitated capillaries, that rose up in the form of a soft molluscum."

Retroversion, Dr. Meigs thinks, "constitutes 75 per cent. of all cases of sexual disorders that are of a gravity sufficient to require appeal to medical advice." In this we agree with the author just as little as in his theory of its production:—

> "An unfilled bladder of urine, by thrusting the fundus backwards towards the sacrum, puts violently on the stretch the ligamenta rotunda; and as the uterus is, to a certain extent, rigid and inflexible, it follows, that if the fundus is thrust back so as to stretch the round ligaments, the cervix must come forward, straining, at the same time, the utero-sacral folds—for the womb moves by way of see-saw—on being retroverted. A great many women and young girls suffer themselves to acquire the bad habit of retaining the urine until a large quantity is accumulated within the bladder. Thirty ounces of liquid in the urinary bladder make a mass as big as a quart measure, and it cannot but thrust the uterus injuriously backwards, causing the neck to see-saw at the same time forward, and approach the pelvis. A long habit of this kind comes at last to ruin the uterine ligaments, so that the fundus being wholly overset backwards sinks down into the Douglass *cul-de-sac*, while the os takes a permanent place near the symphysis pubis; and this is retroversion. It is even sometimes a congenital malposition, as shown by Morgagni and others. But let it be remembered that the womb is constitutionally prone to set off on a race of hypertrophic development; and we may then understand how its health is readily provoked to commence a process of hypertrophization, by the awkward, unnatural, and irritating posture it acquires in retroversion."

May not this be putting the cart before the horse, and treating that as an effect which is in reality the cause of the retroversion? Is it quite clear that simple turning back of the womb is always an awkward and irritating posture? If the proportional frequency of retroversion be so great as Dr. Meigs says, does he mean to assert that such is the proportion of those who acquire the bad habit of retaining urine? We are of opinion that the scientific history and pathological value of retroversion has yet to be written. Dr. Meigs mentions the fact, that when the hypertrophoid condition of the womb is reduced, the organ speedily assumes its natural condition, and his treatment is very properly directed to this end in the first instance, and afterwards to the support of the organ by a pessary. The pessary he prefers is one invented by himself, and consists of a piece of well-curved watch-spring, joined at the ends so as to form a circle.

> "Let it be observed that the distance from the pubis to the sacrum, in this plane, is at least four inches and a half, and the annulus is three inches in diameter. Now, if the ring is introduced in such a manner as to cause the sacral segment of it to pass behind the cervix and rest in the *cul-de-sac* behind, formed by the posterior columna of the vagina, while the pubal or anterior segment rests on the symphysis pubis, it is impossible that the cervix uteri should again come forward to the symphysis, or that the retroversion can occur again while the annulus is left *in situ* to prevent it. Indeed, the vagina is now full three inches in length, and not even prolapsus uteri can vex the patient; for prolapsus is shortening of the vagina, and nothing more and nothing less. Such an annular pessary as this, left *in situ* for a few months, must effectually overcome the contraction '*par defaut d'extension*' of the anterior vaginal column, and, by allowing the ligamenta utero-sacralia to be at long rest, they, by coacervation(!) of their substance, will recover their normal density or tone; and so, the ring being at last taken away, the woman is found to be cured, for the ligamenta utero-sacralia are now condensed again, and the anterior columna vaginalis has regained its ductility."

The author concludes his essay with some remarks upon intra-uterine polypus, but in which there is little novelty. Throughout the work there are valuable practical suggestions, which are entitled to great weight, coming from Dr. Meigs, and also theoretical views, which may very well be questioned. It would be a great improvement to the next edition if the author would affix a glossary of his many peculiar expressions for the benefit of English readers.

On the Structure and Use of the Spleen. By HENRY GRAY, F. R. S., Demonstrator of Anatomy, and Curator of the Pathological Museum of St. George's Hospital. London: J. W. Parker and Son. 1854. 8vo. pp. 380.

MR. GRAY states in his Preface "that this essay was written in competition for the munificent prize endowed by the late Sir A. Cooper; and the adjudicators, the physicians and surgeons of Guy's Hospital, honoured the author by their decision in its favour;" a circumstance which will sufficiently account for the appearance of an additional monograph on a subject that for more than three centuries has exhausted the patience, ingenuity, and research of many of the most able anatomists and accomplished physiologists. Scarcely a year elapses that we are not startled by novel statements and theories on this subject, totally dissimilar to those of preceding observers, and calculated rather to annul, than verify, the opinions of our predecessors in experimental inquiry. Whether this results from a desire to fix and limit the function of the organ, or from a disposition to attribute too much importance to the viscus in its individual capacity, as ministering to the vital phenomena of the system, or from an insatiable yearning after novelty and literary honours, we are at a loss to determine; but of this one fact we are confident, that if any proceeding is calculated to arrest this disturbed and lamentable habit, it will certainly have its source in the publication of such an able and philosophical production as the volume which has emanated from Mr. Gray.

The author introduces the subject with a copious history of the opinions and views of the several anatomists who have devoted their attention to the subject from the days of Hippocrates to the present period, displaying an amount of erudition and patient research truly astonishing, and, in our opinion, quite sufficient in itself to entitle him even to a more munificent prize than that which he has obtained. The advantages arising from an historical record of this description cannot be too highly estimated, as indicating the improvement which ensued in the different modes of investigation, as the science of anatomy assumed the higher character of philosophical research. Hypothetical conjectures yielded to observation, ingenious but yet imaginative theories were either esteemed at their proper value, or totally extinguished, and as the tests of an exact science became applicable and essential to the study of organic laws, men ceased to express mere opinions, confining their views within the safe limits of absolute facts consonant with reason and appreciable to the senses, through the medium of observation and experiment.

Anatomy is represented by an ancient and modern school. The former conceived the relation, position, size, and external configuration of organs and parts, as the most essential object of study, whilst the relative connexion subsisting between intimate structure and function either wholly eluded their observation or failed to elicit the close and patient research requisite to unfold the veiled phenomena of life and its attributes. The latter, or modern school, led by a judicious eclecticism, committed the further advance of relative anatomy to the labours of a few, who, satisfied with the contracted ideas derived from mere topical peculiarity, were content to occupy a field which required but the lowest order of intellectual attributes for even its most successful cultivation: But the majority, seeing that anatomy, taken in its limited sense, formed but the skeleton of a science, and that physiology clothed its spectral lineaments with the breathing drapery of life, sought by the aid of those appliances which modern art, improved chemical operations, observation, and experiment unfolded, to create a basis, on which the principles of inductive reasoning might be founded, in accordance with the nature and spirit of true philosophy.

If our attention was not impressed with higher objects and more useful tendencies, we would willingly select a few of the absurd uses assigned to the spleen, not for the purpose of casting censure or entailing ridicule on the "ancient fathers" of physiology, but merely to inculcate the grave responsibilities that we incur from the advantages which are placed within our grasp at the present period of scientific enlightenment. No longer is it necessary to regard authority, however respectable and ancient, as a sacred vessel,—no longer are fame and honour to be attained by endeavouring to gild those opinions which marked the obscure dawnings of science with the feeble light that foreshadows without proclaiming truth,—no longer can those labourers, who emulate truth in discovery, hope to be sustained in their attempts by looking backward on the unfruitful vista of time, darkened by the shadows of ignorance and superstition. The field which claims their culture, and that will assuredly repay their toil, stands forward in advance of this fruitless waste; and those only know their duties and are sensible of the responsibilities entailed by their position, who strain forward hopefully and zealously to extend the dominion of our science beyond the narrow limits which untutored and unphilosophical minds have assigned to its claims. True it is that the prosecution of a branch of the profession, so abstract in its very nature as physiology, fails, and ever will fail, to obtain the rewards and emoluments to which the sacrifices it demands entitle the laborious investigator. This arises in a great measure from the fact, that the benefits which it confers are remote in their nature, rather than immediate in their influence, and argues, not a deficiency of value, but more evidently the inadequate appreciation of its important relations to medicine. The uninitiated observes the physician almost to decree the cessation of disease, and the mandate is obeyed; but little knows he that the foundations on which he erects his batteries were wrought out and constructed by the patient research of the physiologist or chemist, who fulfilled his weary task unrecognised by the state, unappreciated by the public, and left desolate and forgotten by his compeers, like an overwrought mine exhausted of its valuable treasures. The late Sir Astley Cooper was not only cognisant of this state, but was himself a living evidence of its influence. Although a lecturer on anatomy, an accomplished physiologist, and an extensive labourer in the field of experimental inquiry, yet the sixth year of his professional life yielded but one hundred pounds in requital for the most zealous devotion to his profession; and from this we may trace the reflections that in the after years of his life induced that eminent surgeon to endow this magnificent prize, as an inadequate reward in his belief, to repay the toil and stimulate the exertions of those who should direct their attention to original investigation in anatomy.

Mr. Gray enters into an elaborate detail on the development of the spleen in the fœtal chick. At this period (114th hour of incubation), he says, "the spleen makes its appearance in the fold of the intestinal laminæ, which below is continuous with the edge of the intestine, as far as the constricted portion of the vitellary sac, and above with the lower part of the rudimentary stomach. It is quite distinct from the pancreas, from which it is separated by a granular membrane." This account differs materially from the statements of Arnold and Bischoff—the former conceiving that both the spleen and pancreas have a common and united origin from the duodenum, whilst the latter believes that the blastemic source of both organs is identical, but that the splenic germ proceeds from the great curvature of the stomach, and the pancreatic from the duodenum. In the absence of direct observation, but taking into consideration the important differences in structure, in function, and in their embryonic and permanent position exhibited by the two organs, we are certainly disposed to defend the opinions of the author, even in contradistinction to observers of such deserved reputation as those whose names we have quoted. The priority in the development of the splenic artery, in relation to this view, constitutes a most interesting observation, and which will hereafter appear of much importance. The artery appearing on the eighth day (in the chick), and the vein not until the thirteenth day of incubation, the blood discs being developed coetaneously with the arterial vessel;—the question now naturally suggests itself, has this early appearance of blood discs any weight in determining the function of the spleen as a blood-constructing organ, as maintained by Hewson[a], and subsequently supported by Gerlach[b], Bennett[c], and others? We cannot see any circumstances deducible from the fact as calculated to countenance such a supposition, at least during intra-uterine life, when the formation of discs in the area vasculosa occurs antecedent to the appearance of either the spleen or liver. In fact, the whole history of corpuscular birth, growth, development, and decay, negatives the view that any special organ is deputed to that office. According to our opinion, *wherever a histogenetic material exists for the development of vessels, the element essential to the production of corpuscular evolution is also present, subject to, and influenced by, an ordained law which marks its special type on the nascent tissues.*

The author has also observed "bile in the gall bladder of the fœtal chick, considerably antecedent to the formation of the splenic vein," a circumstance which "destroys at one fell swoop" the ingenious theory of Kölliker, that the spleen is, at least, *solely* concerned in the formation of the colouring matter of the bile.

In the development of the human spleen, the points of peculiarity seem to be its small size in the earlier periods of intra-uterine life, and its subsequent rapid increase up to the adult period, as proved beyond a shadow of doubt by 160 experiments performed by the author, of which we give the results. The organ, compared with the entire body in the fœtus, is at the fifth month as 1 to 1400; seventh month, as 1 to 700; ninth, as 1 to 350. In the adult, the organ, as compared with the weight of the body, is as 1 to 320, 340, 400; and in old age, as 1 to 700. Thus it appears that the organ attains its maximum of development at the adult period, slowly diminishing again in old age to the ratio which obtained at the seventh month of fœtal life. Hence, Mr. Gray infers that its acme of function is coincident with its period of greatest weight, and this corresponds to the exact time of life when nutritive activity especially prevails. But whilst we would admit the general accuracy of these experiments, on strict and impartial examination, they can only be esteemed approximative to the position assumed to exist, for there are so many and various causes which obviously tend to create an extreme diversity in the weight of the spleen, amongst the most frequent being the exact nature and mode of death, whether coupled or attended with portal obstruction or systematic hyperemia, that did there not exist other circumstances corroborating the proposition, it would scarcely stand beyond the evidence of mere presumption.

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[a] Hewson, Experimental Inquiries.

[b] Zeitschrift für Rationelle Medicine, 1849.

[c] Bennett, Monthly Journal of Medical Science, 1852, March, April.

It has not escaped our observation, that at similar periods of life the spleen often exhibits extreme variations in size, wholly independent of local hyperemia or anemia, so frequent in their occurrence and marked in their features as to render individual peculiarity an inadequate explanation of the fact. The author thus successfully, in our opinion, explains the variation in weight by appealing to the results of thirty experiments, which he performed on rabbits:—"In two hours after feeding, the spleen weighed six grains; in five hours, eight grains; in eight hours, eight and a half grains; in ten hours, ten grains; and in twenty-four and forty-eight hours, seven grains. Again, the spleen of highly-fed rabbits, eleven hours after ingestion of food, weighed nineteen grains. The spleen of rabbits starved weighed three grains." The increase is, therefore, manifestly greatest when the digestive process is near its termination, and the food is becoming blood, whilst great variations exist at longer or shorter periods after the final completion of the process and the absence of additional or renewed ingestion.

The consideration of the several structures entering into the formation of the organ occupies 185 pages of the work, and constitutes a most remarkable example of close and rigid observation, resulting in accuracy of detail and the enunciation of sound conclusions obtained through the instrumentality of inductive reasoning. With reference to the muscularity of the fibrous capsule and trabecular tissue,—notwithstanding the assertion of Kölliker,—the question still remains undecided and obscure. Mr. Gray gives the following account of this doubtful tissue:—

"In some of the mammalia, and also in other animals, in addition to the usual constituents (white and yellow fibrous tissue) of the capsule and trabeculæ may be observed other elementary structures which have been regarded as muscular. These consist of fibres which exist separately in small bundles, or more frequently are blended with the white and yellow fibres of the trabeculæ. They consist of pale flattened and spindle-shaped fibres, each of which contains a nucleus which is usually rod-like. They vary in length, the average being about the 400th of an inch; they are about the 2000th of an inch broad. The nucleus has a length of about the 1200th, and the breadth about 10,000th. In the larger trabeculæ of the pig they are blended with the white and yellow elastic tissue, but in small microscopic trabeculæ they form in some cases the sole, in others the chief constituent."

We have before stated that Kölliker conceives these nucleated fibres to represent organic muscle, yet, in experiments performed by the author on the spleens of sheep and oxen with a strong galvanic current, a few minutes after dissolution, the results were negative, whilst in similar experiments, on dogs and cats, a slight pallor and corrugation of the surface was evidenced; but although the latter may strengthen the inference of muscularity, it cannot be received as an absolute proof of the proposition, because alterations in the figure of the organ may result from contraction of the vascular coats, a circumstance much more likely to ensue where the spleen is small, as in cats and dogs, than where a dense capsule and turgid pulp, as in oxen, interferes with the propagation of the galvanic stimulus to the inclosed vessels.

The description of the splenic artery differs scarcely in any respect from that which is at present taught in the schools.

But particular attention is drawn to the isolated distribution of the arterial branches as observed by Heusinger and Assolant, the latter having found, on tying a branch of the splenic artery in a dog, that after death the portion of the spleen to which it was distributed was mortified, and the absence of inter-communication of the vascular branches is still further corroborated by the successful injections of the author. The ultimate arterial capillaries, having formed tuft-like or brush-like clusters of branches, finally terminate in the venous capillaries, which enlarge considerably after this junction is effected. The splenic venous branches ramify in an arborescent form towards either end of the organ, and observe the isolated arrangement in their distribution corresponding with the arteries. They divide and subdivide within the spleen until their sources are arrived at within the organ. Three different modes of venous origin are described:—1st. As continuations of the arterial capillaries (this being most frequent); 2nd. By intercellular spaces, through which the veins communicate with each other (rare); 3rd. By cæcal pouches (also rare). These capillaries exhibit the utmost tenuity in the texture of their coats, being merely composed of a fine layer of epithelium, which alone separates their contents from that of the spleen pulp, constituting in fact intercellular spaces through which the blood must pass in transitu. The influence of congestion, therefore, in this situation must be obvious in causing an escape of the elements of the blood into the pulp tissue, where possibly it may undergo certain transformations in a subsequent stage.

The author next proceeds with the examination of the splenic blood. And, first, as to its amount; he finds this by experiment to vary considerably: "that during digestion the greatest amount exists in the organ about sixteen hours after the introduction of food; the smallest amount, forty-eight hours after feeding; it is also small in ill-fed animals even after feeding." He has likewise proved that the ingestion of liquids and transfusion augments the quantity, whilst abstraction of blood generally causes its marked diminution; and, finally, general or portal congestion likewise augments its volume. In reference to the latter point, every practical physician is familiar with the effect of obstructive diseases of the lungs, heart, or liver, on the degree of engorgement evidenced by the spleen, the organ in some cases of cirrhosis of the liver extending downwards even to the crest of the ileum, circumstances which corroborate more fully the theories of Stukely and Dobson as to the reservoir function of this organ, than the performance of the most elaborately conceived experiments of the physiologist.

The author, coinciding with Tiedemann and Gmelin[a], states, that the splenic blood coagulates in precisely a similar manner to that of either the aorta or jugular vein; but according to our observation there are, undoubtedly, two peculiarities in reference to the coagulation of the splenic and portal blood. Firstly, it solidifies into a uniform mass; and we have never observed the separation into serum and crassamentum as remarked by Mr. Gray. Secondly, it becomes again fluid more rapidly than ordinary venous or arterial blood; a fact which, we presume, has led many physiologists to state, that portal blood does not coagulate.

An important question now appears from the examination of the blood entering and leaving the spleen. Does the latter differ from the former, and, if so, in what respect? Are the elements either altered in quantity or quality? Both of these questions may with safety be answered in the affirmative. Microscopic and general examination of the emerging venous blood reveals the following peculiarities:—

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[a] Recherches sur l' Absorption.

> "The red corpuscles vary in size, some being smaller than ordinary, although of a normal figure; others again being serrated or indented; and more rarely the surface is wrinkled; and lastly, some colourless, as if deprived of their hematine. Occasionally may be observed, in splenic venous blood, blood discs included in cells. Now, these latter are precisely similar to that which is observed in the pulp, consisting of one or more blood discs inclosed in a distinct cell, which in some cases present a nucleus; at other times the included blood discs do not exhibit their normal appearance; they are darker, more refractive, and of an irregular form."

Another remarkable peculiarity, according to the author, and observed, indeed, by Kölliker, consists in the presence of numerous pigment granules and masses, or rod-shaped crystals, which exist either free, or are contained in cells. These are of a dark black, or reddish-black colour, and are not influenced by the caustic alkalies, acetic acid, alcohol, or ether. Still more rarely are seen numerous colourless vesicles, about twice the size of blood discs, which contain in their interior one, two, or more elongate rod-like bodies, of a yellowish-red colour, and apparently of a crystalline form; being dissolved by acetic acid, they seem in their nature allied to the hematine of the blood, and Virchow names their pigmental matter hematoidin. The venous blood also presents an increased amount of white corpuscles, but their perfect identity with the colourless globules of the general blood mass is fairly admitted. This observation would appear to strengthen the supposition of Donnè[a], that the spleen represented the laboratory for white corpuscles, but it seems to us that the increase is only apparent, and the error has its source in the circumstance of the absolute decrease of the red discs producing a comparative augmentation of the colourless globules. Still we would in nowise be understood to doubt Donnè's opinion, for the direct similarity existing between the corpuscles of the spleen pulp and venous blood forms no inconsiderable argument in support of the ingenious theory of that distinguished microscopist.

We have now direct evidence of blood disintegration occurring in this locality, yet it is here and in other ductless glands that Dr. Bennett assumes the primordial steps of blood disc development to have their source in the fissiparous division of the nuclei of the white corpuscle. We can see at once that this physiologist is much indebted to his predecessors; as we can evidently trace the connexion subsisting between his views and those of Magendie on absorption, Barry and Donnê on the blood corpuscle and its source. That the spleen is a blood secreter may be true, but we have sought in vain for any proofs that such a function was performed by the organ, beyond mere conjecture and prejudiced observations; whilst the views advocated by Mr. Gray are supported by indisputable facts, namely, by the palpable process of disintegration of the discs in its various stages; by the products of their dissolution in the form of concrete pigment and soluble colouring matter, tinging the serum of a reddish colour; and by experimental demonstration that an absolute diminution of discs occurs in the venous splenic blood. This latter, and seemingly to us important fact, is evidenced by the results of forty-nine experiments, instituting a comparison between aortic, jugular, mesenteric, and splenic venous blood, which gave the following conclusions: solid constituents in 1000 parts of arterial blood, 239; in 1000 jugular, 201; splenic, only 187;—circumstances which, in our opinion, render any further examination of Hewson's, Bennett's, and Gerlach's views, something at least allied to a superfluous waste of the English language.

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[a] Cours de Microscopie, pp. 99–100.

It may, therefore, be safely concluded from the foregoing premises that in the emerging splenic venous blood the red corpuscles are absolutely diminished, whilst the iron, albumen, and fibrin, are increased also absolutely; but the greatest augmentation of the latter is coincident with the diminution in the number of red discs. It is likewise proved, that the white corpuscular element is also augmented; still, in the present state of our knowledge we cannot decidedly determine whether the increase is absolute or relative.

The author now proceeds with a detailed account of the anatomical elements of the spleen pulp or parenchyma. This consists of microscopic trabeculæ, capillary blood-vessels, and parenchyma cells with blood discs. The two former elements have been fully treated of in a former portion of this review, and we shall, therefore, confine our observations to the latter constituents. The parenchyma cells constitute a large amount of the pulp, yet are found to vary in number according to the state of nutrition, being in considerable quantity in highly fed animals, while, on the contrary, in starved subjects of experiment not the slightest trace of them can be detected. These cells resemble remarkably the white corpuscles of the blood, the author looking on them as "a protein or nutritive compound represented by an organized tissue."

The discs of the pulp represent a most interesting subject for investigation, as the question of function is materially connected with the results of accurate observation on this element. The author states that he has seen single corpuscles, nummular heaps, and discs, included within cells, and all in various stages of dissolution, deformed in shape, altered in colour, and even representing the *debris* of the perfect element; and it is further peculiar as a process in the fact that, whilst the act of disintegration by cellular inclusion is rare in the human subject, it constitutes almost the invariable rule in the lower animals.

The author next treats of the splenic corpuscles or Malpighian bodies, entering very fully into their description:—

> "They are small opaque bodies of a gelatinous consistence, disseminated throughout the substance of the spleen parenchyma, giving to the cut surface of the healthy organ a speckled grayish-white appearance. They are distinct at all periods of life, but more apparent in the infant than in the adult or old age. Congestion obscures them, and in some cases, even where the organ is perfectly healthy, they are invisible to the naked eye. They are present in all mammalia and birds, but absent in reptiles and fishes. Their form is spherical, conical, or pyriform, sometimes flattened; and their size is, in the adult, from one-tenth to the one-fourth of a line, but the size varies considerably, being chiefly influenced by the state of the nutritive function as to excess or otherwise. They are surrounded by the spleen pulp, one-fourth or fifth of that tissue being constituted by them, and are connected with the arteries in three ways: first, lying in an angle of bifurcation; secondly, sessile on an arterial branch; and thirdly, connected with the walls of the blood-vessels. It is to be further remarked that the two latter forms are rare. Structurally considered, these corpuscles consist of an external capsule formed by elastic and homogeneous fibrous tissue, the contents being a granular plasma, whitish in colour, semifluid, and translucent, presenting the following solid constituents,—amorphous, finely granular matter; nuclei; a small number of highly refractive globules; and nucleated cells."

As to the function of the Malpighian bodies, little need be remarked, except merely to say, that in consequence of the series of well-conceived experiments of the author proving that they exist in greatest abundance where nutrition is most active, combined with a larger amount of ingesta than the system requires, we are forced to adopt his views as to their action,—*that they are reservoirs for excessive nutritive material during repletion of the system.* Gerlach, however, with Evans, states, that a decided connexion exists between the deep lymphatics and the Malpighian bodies, but the cells being perfectly occluded negatives this view in our opinion. Again, Tiedemann and Gmelin, Hewson, Autenreith, and others, have asserted that the lymph of the spleen differs from that of other organs in several respects, but Mr. Gray is led to the conclusion by much and extended observation, that it differs in no one particular from that derived from other sources; and it is not difficult of belief that the few blood discs observed in this fluid, and which formed the basis of so many ingenious but truthless theories, resulted from congestion, causing a communication between the small lymphatics and the capillaries in the yielding structure of the spleen.

We are reluctantly compelled to avoid even a cursory examination of the author's labours in the interesting field of comparative physiology in relation to the spleen. We shall, therefore, proceed at once to disclose the light which has been thrown on its physiology by the researches in structural anatomy prosecuted by Mr. Gray. These should naturally lead us to infer the precise function which would be attributed to the organ, namely, *to regulate the quantity and quality of the blood*, the former function being proved by the yielding nature and elastic properties of the tissues composing the framework of the organ, which evidently adapt its capacity to periodic and alternating states of distention, in accordance with anemic and hyperemic conditions of the vascular system; and it is further strengthened by conclusions drawn from direct experiment on the lower animals, which indicate the influence of artificial plethora, induced either by transfusion, copious ingestion of solids or fluids, and asphyxia on the capacity of the organ; whilst lastly, the revelations of pathology point even more significantly than the most elaborate experiments to the importance of its office as a diverticulum to the portal and general circulation; and here let us remark, it forms a subject calculated to impress the reflective mind with the enduring nature of truth, that this theory should have been first enunciated, more than a century and a quarter ago, by Dr. Stukely[a], corroborated by Hodgkin[b] one hundred years later; again strengthened by the experiments of Dobson[c], and finally placed beyond the most remote shadow of a doubt by the investigations of Mr. Gray. How enduring and unalterable is truth once revealed in articulate and intelligible characters;—cast forth to the living world, it weaves its symbols with the spirit of intellectual man; —locked within the nervous grasp of generation succeeding generation, it endures coexistent with the psychical spirit of which it is the manifest offspring; and though the frigid and darkened clouds of a season may arrest its growth and obscure its grandeur, the very power itself which raised and created it from the deep and mysterious recesses of nature's silent records may have passed to another and stranger scene; yet the genial breathing of spring surely fertilizes its latent spirit, and it comes again, returning after the lapse of ages, draped in "the snowy vestments which marked its virginity," unchanged and unchangeable for ever.

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[a] W. Stukeley on the Spleen; its Description, History, Uses, and Diseases; being the Gulstonian Lecture for 1722.

[b] Hodgkin on the Uses of the Spleen: Edinburgh Medical and Surgical Journal, 1822.

[c] William Dobson; An Experimental Inquiry into the Structure and Function of the Spleen.

We have now to consider in what respect does the spleen alter the quality of the blood. An examination of the emerging splenic venous blood indicates:—1. A diminution of red discs, which change certainly occurs in the pulp. 2. An increase of fibrine, albumen, and colouring matter; and it seems not at all improbable or inconsistent to conceive that this excess of fibrin and presence of colouring matter are due to the disintegration of the blood discs, whilst the increase of albumen has its source in the splenic cells and Malpighian bodies, which in this respect perform an elective function.

Ere concluding, we desire to express the obligations under which the profession must ever labour to the late Sir Astley Cooper, for being the source from which has emanated so much that is really valuable; to the physicians and surgeons of Guy's Hospital, for the discrimination evidenced by their selection; and lastly, to Mr. Gray for the laborious investigation of a subject most abstruse in its nature, difficult in its character, and apparently, though not really, unfruitful in its results.

Clinical Lectures on Paralysis, Disease of the Brain, and other Affections of the Nervous System. By Robert Bentley Todd, M.D., F.R.S., Physician to King's College Hospital. London: Churchill. 1854. 12mo, pp. 462.

The treatment of nervous diseases constitutes to many physicians the least desirable exercise of their duty, although the pathology of these affections affords to the philosophic mind an ample field for the most profound study. Visible or tangible alterations of structure are equally within the reach of each one possessed of the unimpaired use of his senses; constitutional conditions, denoted by such symptoms or physical changes as daily observations confirm to be generally uniform in their associations, present to the ordinary experience but little difficulty: hence it occurs, that men of no very extended mental range may practise the medical profession, and practise with success—that is, if we can dignify routinism by such a term. Habit affords them a certain confidence in their powers of diagnosis, which, it may be, have never been severely taxed. When, at length, a case of an unusual character, an example of "a nervous disease" comes under their consideration, some great blunder in prognosis or treatment is sure to arise? Yet, these practitioners never think of blaming themselves, but refer their ignorance to the presumed obscurity of the subject, and, taking shelter under the common assumption, which presumes an unsettled state of knowledge on most points of nervous pathology, exculpate their ignorance by the assurance that others do not err less. Nervous diseases are, to all of this class, a dark, mysterious volume, within which everything that is dangerous, obscure, and intractable, is to be found. This constitutes their safeguard in many difficulties. The harmony of the system is disturbed, they fail to detect the cause,—nervousness explains the condition. The visceral actions are interrupted, and refuse to respond to the measures employed,—nervous affections, or "functional derangements," must, therefore, be their source. These practitioners witness alterations of structure originating equal changes in function, but never reflect on the possibility that alteration in function may be presumed to indicate proportionate structural changes, not the less certainly present because they are not prominently manifested. The public, generally speaking, believe that nervous lesions are beyond the reach of our art, and readily excuse failure which their credulity regards as unavoidable. Now, it is high time that these erroneous conceptions terminate, for it cannot be denied that they have, in no small degree, contributed to favour the success of the many impostors who pander to the public weakness, and promote this general misconception, that they may plunder the public purse. Were all medical men impressed with sound doctrines, in reference to this class of diseases, the public would be soon convinced that medicine is not a game of chance, but a science, based on as certain principles as any of those existing in other departments of human knowledge. It is true, that in many diseases, and in those of the nervous system more particularly, the greatest care in investigation, and the most refined powers of discrimination, are requisite to determine not only the nature, but also the relation of the morbid changes present. It is true, that many instances might be recorded in which the most experienced physicians have been in error in their diagnosis; and even where their diagnosis was correct, the best-directed efforts have failed to realize the expectation entertained. We admit all this, and still our medical faith remains unshaken; for we believe that, to complain under such circumstances, is to hope of medicine beyond its powers of performance, and to seek from man what he can never expect to attain.

Such an admission might be possibly construed into a confession of our incompetency to treat these affections. It is far otherwise: we are prepared to allow that human knowledge has its limits, that there is much we can never hope to know; much that it is not desirable that we should know; but while thus admitting the mysterious operations of Providence, we at the same time contend, that for all practical purposes of life the resources within our reach are ample and sufficient, if they be diligently cultivated and properly applied. To complain that human knowledge is incapable of solving every difficulty in the human organism, is only to complain that the finite capacity of man is inferior to the infinite wisdom of his Creator; to be satisfied with less knowledge than it is permitted us to attain, is to neglect the means afforded us for our safety while here. Disease and death are the heir-looms of humanity,—the one may be incidental, the other must be certain; they, therefore, who would presume to say that because treatment in nervous diseases often proves unsuccessful, it must therefore be injudicious, might as well affirm the same respecting each of those other affections on which death ensues.

We admit that, amongst many, undue difficulty and uncertainty prevail in the diagnosis and treatment of nervous affections. This is now the less excusable, as, of late years, our attention has been especially occupied by their consideration, and, reviewing the data we have for forming our opinions, we are not prepared to acquiesce in the doctrine, that other difficulties exist than such as are explicable by the knowledge we possess. That we are mainly indebted to recent observation, experiment, and research, for this improved state of our knowledge, cannot be denied; while to no one are we under deeper obligations than to the distinguished physician whose writings it is now our privilege to enter on the consideration of.

There are, however, many reasons why the difficulty in diagnosis and prognosis of nervous affections must ever continue to be immeasurably greater than that experienced in the every-day range of practice, inasmuch as they differ from other affections in those most important particulars,—that the organ principally involved is altogether beyond our reach, while the structures constituting this organ, though distinct in their duties, become conjoined in their operations, and are unlimited in their sympathies. To trace the progress of these affections requires, consequently, greater powers of discrimination, a closer intimacy with morbid influence, and a mind habituated to more careful reflection than usually appertains to ordinary individuals. Any author, therefore, who undertakes the exposition of so difficult a subject, and succeeds in offering such directions as may guide the judgment aright, is justly entitled to the gratitude of the profession.

In placing before our readers the result of Dr. Todd's observations, we offer for their consideration the decisions and opinions of a truly philosophical medical mind. We afford them also the example of a great physician, who studies nature as she is, and confesses the fallibility of man. We, therefore, confidently invite them to the perusal of his work, being satisfied that the student will carry therefrom a mind more deeply impressed with the realities of the profession he has adopted, while the practitioner cannot fail to recognise a true picture of morbid action in its most obscure operations, and thus gain additional confidence in those difficult affections of which it so ably treats.

In the general observations on paralysis with which Dr. Todd commences his work, the signification of that term is by him limited to the loss of power of *motion*, inasmuch as it is the form which generally predominates; the loss of *sensation*, though often conjoined at the commencement of an attack, usually disappearing as it progresses. Either form, it is stated, may occur separate, paralysis of motion being that most frequent and persistent, paralysis of sensation having the greatest and speediest power of recovery. Paralysis is regarded but as a symptom of a disease,—an effect due to a cause, which cause itself is not always the essential disease. Now here a question might arise:—In those cases where permanent paralysis continues, and the primary cause has ceased to operate, or has been removed, may not this effect, in its turn, be regarded as constituting the disease? Certainly, we know that treatment locally applied has in many instances proved most beneficial. The causes which may give rise to paralysis are believed to rest either in an affection of the nerve or nerves, whose power is destroyed in some part of their course, or in a morbid state of that centre in which the nerve or nerves are implanted, or with which they may be less directly connected. Whatever interferes materially with the conducting power of nerve-fibre, or the generating power of nerve-vesicles (gray matter), will therefore constitute a paralyzing lesion. The causes adequate to do so, Dr. Todd is of opinion, are: *First*, those capable of poisoning the nervous matter, and so rendering it unable to propagate the nervous force. Such poisons may either act on, or be generated in, the system; amongst those acting *on*, the poison of lead, the effects of chloroform, of ether, or of opium, are included; amongst those generated *in* the system, range retained urinary or biliary principles, or the poison of rheumatism and gout. In the great majority of cases, is the author warranted in attributing the paralysis in rheumatism and gout to the existence of a poisoned blood? Is it in the early stages of these diseases a real paralysis we have present? or a voluntary, we might almost say an instinctive, condition, the result of apprehension of that pain attendant on the slightest movement of the limbs affected? in other words, a mechanical, rather than a vital influence which eventuates in interruption of power. *Secondly*, it is stated that any morbid process which greatly impairs the natural structure of nerve matter, will paralyze;—inflammation, hardening or softening of the nervous matter, may therefore so terminate. *Thirdly*, a solution of continuity of nerve fibre will paralyze;—division of nerves sufficiently establishes this. Dr. Todd here remarks, that a solution of continuity from *the melting down* of the fibres, is the frequent cause of sudden paralysis in cases of softening, or in cases of sanguineous effusions. Our own experience, though corroborating the second, does not enable us to speak with equal confidence respecting the first of these propositions. Paralysis in those cases has, we conceive, been rightly noticed, under the second division of causes. We incline rather to the belief that the reasons there assigned offer its most usual and probable explanation; more particularly, as the amount of softening apparently requisite for the one, is fully adequate for the other. By this we do not mean to question the possibility, but rather to affirm the rarity of such an occurrence as a cause. Our reasons for doing so, we shall subsequently enter on more fully. *Fourthly*, pressure on a nerve or nervous centre will paralyze;—of this there are innumerable proofs. Concluding these remarks, Dr. Todd observes, "That it is probably by compression that congestion paralyzes," but that it cannot often be regarded as a paralyzing lesion.

Attention is next directed to the extent of the centre of volition, as reaching from the corpora striata in the brain, down the entire length of the anterior horns of the gray matter of the spinal cord, including the locus niger in the crus cerebri and much of the vesicular matter of the mesocephale and of the medulla oblongata. A morbid condition of any portion of this centre is capable of producing paralysis, but as the intracranial portion of it exercises the greatest and most extended influence in the production of voluntary movements, its lesions are those which give rise to the most extended and complete paralysis. In our estimation of all cases of cerebral disease, it must not be forgotten that the centre of volition for either side of the body is not altogether on the same side of the body; the explanation of such a fact, resting in the anatomical demonstration of the decussation with each other of certain oblique fibres from the anterior pyramidal columns of the medulla oblongata on either side.

As an example of the first class of causes capable of producing paralysis, we are furnished with the particulars of a case of painter's colic: its details do not present any unusual phenomena. Dr. Todd believes that the muscles and nerves are early affected in this disease; and that, at a subsequent period, the nervous centres become implicated. The presumption that the paralysis extends from the periphery to the centre, finds its corroboration in the fact, that local paralysis always precedes, and generally for some considerable time, the epileptic convulsion or those other symptoms of certain disease observable in this affection. The late Dr. Graves' views of peripheral paralysis are thus confirmed.

In reply to the question, Why does the effect of the poison of lead alight upon the muscular and nervous tissues chiefly? Why upon the muscles of the extremities rather than those of the trunk? And why upon the extensor muscles in preference to the flexors? Dr. Todd states his opinion, that the blood being loaded with a poisonous material, impregnates these tissues and structures proportionately to the activity of their circulation; that as the muscles of the upper extremities are used more, and probably on that account experience more active nutrient changes than those of the trunk and lower extremities, they are, therefore, poisoned first, a supposition further warranted by the increased paralysis observable in the extensor muscles of the arm, and those constituting the ball of the thumb, which are the parts most exercised in the practice of painting. Now, without doubting the adequacy of such an explanation, might we not also add the influence of the direct contact with the poisonous agent? Since paralysis of the lower extremities is of rare occurrence, yet these are also actively employed, but are usually protected from either contact with, or exhalations from, the deleterious agent. The treatment advised for this affection is one calculated to promote depurating excretions for the elimination of the poison, or the employment of certain means which by their chemical action may nullify its operation. Amongst the first may be placed the use of friction, &c., while, for the second, the use of baths containing sulphuret of potassium, and the internal administration of iodide of potassium are the remedies, which, conjoined with the cautious exhibition of galvanism, and, it may be, the tonic effects of citrate of iron, have been found of most benefit. Dr. Todd observes, in reference to the baths, "I give this to my patients empirically, but I am quite sure they derive much benefit from its employment." Paralysis resulting from pressure on a nerve, is illustrated by a case in which the application of the ordinary figure-of-eight bandage, for fracture of the right clavicle, was followed by loss of sensation and muscular power. The treatment principally employed was galvanism; and, we are informed, it was some time before any improvement became manifest, nor was the individual perfectly cured. Such cases, from analogous causes, are regarded as not of uncommon occurrence; in reference to them we read, that when the pressure which occasions the paralysis has been long continued, they seldom come to a favourable termination, "*since nerve-tissue is one which never regenerates quickly and seldom completely.*"

In his observations on hysterical paralysis, Dr. Todd avails himself of the circumstance, that want of symmetry existed on the opposite sides of the patient's countenance, to remark that such is of almost general occurrence; so that in our estimation of facial paralysis, increased caution is requisite. The differential diagnosis between hysteria and brain disease is stated to rest chiefly in their negative signs, as they have many features in common. The case of hysteria originating these observations was of a class most liable to be mistaken, being of the least common form, in which the paralysis was far more general than usual, nearly amounting to hemiplegia. A sign believed by Dr. Todd to be characteristic of the hysterical form of paralysis, as contrasted with the hemiplegic from organic lesion of the brain, is, that while the latter uses a particular gait to bring forward the palsied leg, first throwing the trunk to the opposite side, and resting its entire weight on the sound limb, and then, by an action of circumduction, throwing forward the paralysed leg, making the foot describe an arc of a circle; the hysterical patient drags the palsied limb after her, as if it were a piece of inanimate matter, and uses no act of circumduction, nor effort of any kind to lift it from the ground, the foot sweeping the ground as she walks. The pathology of hysteria is referred by Dr. Todd chiefly to a depraved state of the general nutrition, which tells especially upon the nervous system,—the important influence of moral causes favouring this affection is also recognised. That this is the true view of the pathology of many of those cases, the nature of the treatment most generally successful, strongly confirms, while, at the same time, it leads us to doubt the propriety of such a nomenclature for this class of cases, since if diseased nutrition be admitted as their cause, does not a sufficient explanation rest therein, and do they not, therefore, cease, *de facto*, to be admissible under such a division as hysterical?

Dr. Todd next notices some cases of paralysis which have their origin in disease of the brain, a prominent feature of this kind of paralysis being its one-sidedness, constituting that which is called hemiplegia, or paralysis of one side of the body from disease of the opposite half of the brain. Having detailed the particulars of a case, amongst the comments on its peculiarities we learn that resistance on the part of the biceps to the complete extension of the forearm upon the arm, is often the only mark of any irritated condition of the nerves or muscles of the palsied limb; that while the limb is quiescent, the muscles are soft and relaxed; but the moment extension is attempted, the biceps becomes firm and resisting, for the extending force excites the biceps by reflexion, where there is even the slightest degree of irritation in the nerves of the affected limb. The peculiar appearance the eyes occasionally present, Dr. Todd believes is due to their being constantly directed downwards by convulsive action of the depressing muscles; and the fact, that strong voluntary efforts to open them occasion more excited movements of the eyeballs, accompanied by very marked convulsive twitchings. The vision under these circumstances is sometimes double; an inequality in the size of the pupils being present.

In general, in cases of hemiplegic paralysis, the tongue deviates to the paralyzed size. A case narrated was an apparent, though not a real exception to the rule, in consequence of projecting teeth diverting that organ to the sound side: a practical fact worthy of attention. The characters of hysterical pain, as contradistinguished from pain the result of organic disease, form the ground for their diagnosis,—the one situated in the course of the nerves over the brow, or across the forehead, or in the temple, or spreading upon the parietal or occipital bone, or at the vertex, may be regarded as symptomatic of deranged digestion, or of some constitutional disturbance, or of an hysterical or hypochondriac state, or as the result of debility or exhaustion; but when the pain, whether sharp and burning, or dull and heavy, is fixed in its situation, and varies only in intensity, not in locality, it may generally be referred to intra-cranial irritation, such as probably would arise from disease of the membranes, or of some superficial parts of the brain. The pain from such a cause it may be stated, we have observed, is always of a much severer and more decided character than that denoting deeper-seated mischief. Dr. Todd believes that the parts of the brain whose affection generally produces hemiplegia, are the corpus striatum and the optic thalamus, the most frequent lesions of which are softening, a clot, or abscess. The intimate union of these two bodies renders it almost impossible that one can be affected without involving the other. Disease in the vicinity of these parts may also cause paralysis, if it be adequate to produce pressure. The same observation applies to the presence of a clot, an abscess, or a tumour in the middle of the centrum ovale. As inflammation of the dura mater cannot proceed to any great extent without implicating the arachnoid or pia mater, whence effusion of lymph or of pus follows, it also may be considered as amongst the causes capable of producing hemiplegia.

Inflammation of the deeper seated parts, either in the cerebrum or cerebellum, is adequate to the same end, if interfering with the origin or progress of the nervous supply. Spastic rigidity of the muscles supervening early in the paralytic seizure, or simultaneously with the paralysis, Dr. Todd regards as indicative of irritative disease within the cranium. That irritative disease may exist without spastic rigidity there are many examples to prove. We have made *post mortem* examinations in which extensive inflammation of the several membranes was perceptible, and in which effusion of lymph had taken place, and yet no paralysis whatever had been present. In those cases in which there has been a very complete paralysis, with perfect relaxation of the muscles, where these muscles after a time slowly become rigid, the fingers flexed, and sometimes firmly pressed upon the palm of the hand, the hand bent on the forearm, and the forearm upon the arm with a tense and spastic, although wasted condition of the muscles, Dr. Todd directs attention to this late form of muscular rigidity, which he declares must be carefully distinguished from the early one, inasmuch as it indicates that there has been loss of substance in the brain, and that the cicatrix is undergoing contraction.

The author next describes four different conditions of the muscles in paralytic limbs. The first differs scarcely at all from that of healthy muscles, except that they may be less firm, and less excitable by the galvanic stimulus, where the paralyzing lesion is not of an irritative kind. The second presents complete relaxation of the muscles: they are soft, imperfectly nourished, and waste with wonderful rapidity, and betray little or no excitability to the galvanic stimulus, the general nutrition of the limb appears in many instances to be depressed, the pulse in the arteries of the side is weaker, and œdema is occasionally present. The third condition is one of contraction and rigidity, the flexor muscles always exhibiting this state to a greater degree than the extensors; the muscles, though wasted, are stretched like tense cords between their origin and insertion. The biceps and hamstring muscles best illustrate the condition, which Dr. Todd considers as a form of muscular atrophy, in which tenseness, but not firmness or plumpness, accompanied by a contracted and rigid state, is the prominent feature. In the fourth condition the muscles suffer little, or not at all, in their nutrition; are either constantly firm and rigid, or become so on the slightest movement of the limb, the paralysis being seldom complete. The indications for treatment which these various states afford, are regarded by Dr. Todd to be as follows:—When the condition of rigidity is present early the patient will bear local bleeding, or local counter-irritation, or both; and may derive benefit from these measures, provided other symptoms do not contra-indicate them. Now it may be asked, does spastic rigidity when occurring early invariably denote an active lesion; may not the other symptoms contra-indicating such energetic measures, argue a passive condition of the system, if not of the lesion which is present? The possibility of such an occurrence is proved by a case subsequently detailed, in which paralysis of the left side of the body took place in consequence of the supply of blood being cut off from the brain by a dissecting aneurism, which had plugged up the common carotid artery on the right side. For such cases, as a general rule, the treatment recommended by Dr. Todd merits our fullest confidence, the exceptional examples being, as he intimates, determinable by their peculiarities. The state of complete relaxation affords a contra-indication to the employment of antiphlogistic treatment. For the relief of that condition, in which sometime after the paralytic seizure, the muscles assume the contracted state gradually; the author wishes it were in his power to suggest means for its arrest. Where the lesion is of the inflammatory kind, active counter-irritation and the use of mercury, are most advisable. Dr. Todd differs from Dr. Marshall Hall regarding the augmented irritability of the muscles in a paralysed limb, and their consequent liability to be more excitable by the galvanic stimulus. His experiments lead him to believe that in one class of cases the paralytic limb was acted on very slightly or not at all, and in every instance to a less degree than the sound limb; that in a second class, no perceptible difference existed as to the effects of electricity on the two limbs: these being cases of recent paralysis, the cause of which was not of a very depressing nature; while in a third class the electricity produced a greater effect on the paralyzed than on the sound limb, from which he concludes, that in spastic rigidity a greater excitability is present, but that in the atonic condition the paralyzed limb is sometimes scarcely at all to be excited.

In his observations respecting the *post mortem* appearances of those cases to which we are indebted for the preceding highly practical and truly valuable remarks, though Dr. Todd's diagnosis of the nature of the disease present was strictly correct, and his opinion respecting its locality, for all useful purposes, sufficiently so, yet, inasmuch as it had been premised that the dura mater might be involved, and that it was possible other portions might also be secondarily affected, we find him particularly dwelling on the exaggeration in the following terms addressed to his class.

> "It is a duty we owe ourselves to scrutinize particularly any errors we commit, either in diagnosis or practice. Depend upon it, if you do this faithfully, you will derive great benefit from it: your experience will be infinitely more profitable than if you slur over your mistakes without explanation or inquiry. On this account, I make it a rule never to pass by any mistake made here in diagnosis or practice; and I feel that in commenting upon such, I am far more likely to benefit both you and myself, than were I to dilate at length upon successful cases. The successful cases speak for themselves; the failures we would fain throw a veil over; but be assured, in so doing, we benefit neither science nor ourselves."

Here spoke a true philosopher, a great physician, and a worthy son of science whom she has deservedly honoured. The writings of such men well serve as an example: their precepts should be treasured, that their teaching may not be forgotten.

Paralysis proceeding from affections of the *portio dura* next receives Dr. Todd's attention. From his observations on the several cases treated, we derive practical hints of extraordinary value. The pathognomonic sign of paralysis of the *orbicularis palpebrarum* muscle, distinguishes this affection from the more serious forms of facial palsy dependent on disease of the brain and palsy of the fifth or of the third nerve. The views entertained by Sir Charles Bell respecting the upward movement of the eyeball during sleep are disputed by Dr. Todd, on the ground that such a movement accompanies only the forced contraction of the orbicular muscle of the eyeball, while in sleep that organ seems suspended in the orbit, being equipoised among its muscles. Dr. Todd, though differing from Sir Charles Bell on this point, eulogises the accuracy with which he has investigated the subject of facial paralysis, and enters fully into the means Sir Charles has pointed out of diagnosing between this lesion and the result of intra-cranial disease. The fact noticed by Romberg that in some instances the velum of the palate participates in the paralysis, and thereby indicates an affection of the nerve in the Fallopian aqueduct, is attributed by Dr. Todd to the probable exercise of some influence by the portio dura on the muscles of the palate, through the greater superficial petrosal nerve of Arnold, which arises from the knee-shaped swelling of the trunk of the portio dura in the aqueduct of Fallopius, and communicates with Meckel's ganglion, whence the palate-muscles derive their nerves. The duration of this affection is stated to vary considerably, the prognosis to be dependant on the cause, and the treatment to be regulated accordingly.

Dr. Todd's practical hint in the employment of galvanism, we subscribe for our junior readers. He cautions, that we remember in the application of it, "to vary the direction of the current, and never to continue it so long as to exhaust any small amount of nervous force which the nerve may be capable of maintaining."

Dr. Neligan, in the year 1846[a], offered to the profession some practical observations on the therapeutical employment of magnetic electricity, when he particularly dwelt on the fact Dr. Todd again so strongly impresses,—that to *local* and not to *general* paralysis is electricity, as a remedial agent, applicable. The cases related in the essay to which we allude, and those further observations of Dr. Todd, are highly instructive and most important, since, to quote Dr. Neligan's words, "There is reason to apprehend that the indiscriminate employment of this remedy by self-styled electricians may tend to bring it into disrepute." In the present day more particularly, when such agency is by many regarded as a kind of universal remedy, the profession cannot be too well informed respecting its capability, or too sensibly impressed with the fact that a powerful and most effective therapeutic instrument may from ignorance or inefficiency be productive of much evil, and materially aggravate those conditions its judicious employment is so well calculated to benefit.

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[a] Edinburgh Monthly Journal of Medical Science, May, 1846.

In his observations on disease of the brain, in which paralysis ensues, Dr. Todd impresses the importance of inquiring what state the patient was in before the attack. The diagnosis between facial and cerebral paralysis is often of the greatest consequence under such circumstances. Dr. Todd believes that immediate paralysis may be occasioned by either a clot of blood from a sudden rupture of a blood-vessel—apoplexy, or the more slow disease we have already noticed, in which the nervous structure having undergone a process of softening, a solution of continuity of its fibres, is at length effected by some temporary excitement, and all power of voluntary motion is lost, as suddenly as the galvanic current ceases on breaking the circuit. This is therefore regarded as one cause of paralysis in cases where there is no apoplexy. Such a softened condition is also believed to be generally the precursor of apoplexy, and to be frequently accompanied by one or more clots of blood of various sizes. Dr. Todd's experience thus confirms that of M. Andral, M. Gendrin, Abercrombie, and others who have observed premonitory symptoms of cerebral hemorrhage. M. Andral writes: "Their existence incontestably proves that, before the blood is effused, there is already a morbid state going on in the brain, the nature of which it would be important to determine."

We may here state more in detail, our reasons for hesitating to admit that the cause of sudden paralysis under circumstances of such extreme softening, is generally due to rupture of the nervous fibres. The investigations of Wagner and Kölliker have demonstrated, that while some nerve tubes run into, others originate, from the ganglionic corpuscles, and that many of those corpuscles may be observed conjoining with the axis-cylinder or central band of Remak and Purkinge within the tube; now, if, according to the researches of Hannover, we admit, that in the nerve fibril, the circumferential neurilemma is but the investment of the clear *central axis* portion on which the true functions of the nerve depends, and allow that those corpuscles, which not only invest, but also enter into the constitution of this central conducting nervous medium, can proceed to disintegral change adequate to produce a melting down of the fibres—is it not reasonable to suppose that a cause sufficient for such destruction of the one should as surely, vitally, affect the other on which it exercises an equal, if not a more active influence? Or, that paralysis from a morbid condition of the essential nerve matter would, as it were, anticipate paralysis from the rupture of those neural tubuli, which, allowing their continuity to be preserved, it may be presumed had, *de facto*, on account of their morbid condition previous to their rupture, ceased to fulfil those purposes for which they were designed. The presence of softening without rupture of the nerve fibres is regarded as adequate to explain the occurrence of paralysis; we have no means of determining, in those cases in which sudden paralysis occurs, and rupture of the fibres is detected, associated with much extreme softening, that this rupture, being equally a result of the softened condition, is necessarily coincident with the accompanying paralysis. Dr. Todd believes those views he advances—"That the sudden occurrence of palsy may be attributed to the rupture or rapid deliquescence of fibres which had been already softened, but not sufficiently so to interrupt their power as conductors of the nervous force, may, in some instances, serve to explain the recovery of the palsy, on the supposition of the restoration of the normal nutrition of the nerve-fibres and the reunion of those which had given way." Now, surely, we could scarcely hope to meet with a case in which a structure, admitted in its healthy condition to be slow and difficult in its restoration, would, when in a state of deliquescence or softening, undergo such restorative action as should insure renewed integrity of its function. That the nerve-fibres are found ruptured in cerebral softening is a pathological fact; that paralysis accompanies such softening, and becomes developed during its progress, is also undoubted; but, that rupture of the nerve-fibre is the cause of this paralysis, or that when under such circumstances rupture has taken place, restoration of healthy function or reunion of the severed parts is at all likely to be accomplished, we are by no means prepared as readily to admit. We venture on these opinions simply as a point of pathological interest, not as being in the slightest degree intended to detract from the great practical value of Dr. Todd's inferences, inasmuch as we are satisfied the determination of the question could neither influence the prognosis nor advance the treatment.

In our last Number, when reviewing the work of the late Dr. Barlow on Fatty Degeneration, we alluded to this subject, on which the researches of Mr. Paget, Dr. Burrows, and Dr. Budd, have already thrown much light. Paralysis, the result of inflammatory softening, is owing to the pressure of the deposit consequent on such inflammation. The white and the red, or atrophic and inflammatory softening, may thus be met with under opposite circumstances:—the first of these, to use the words of Dr. Burrows, occurring in individuals, "the very reverse of the apoplectic make."

The employment of the galvanic current, as affording corroborative indications of the cause being either of a *depressing* or of an *irritative* kind, we have already mentioned. It must, however, be borne in mind that irritation is not always inflammatory.

M. Brierre De Boismont, in concert with Duchenne of Bologne, to the latter of whom our pages are indebted for an able essay on the therapeutical employment of electricity[a], has instituted most interesting and important researches in reference to the paralysis of the insane. These observers recognise various forms of the disease, some dependent on lesions of the spinal marrow, others on affections of the great sympathetic; many that cannot be associated with any appreciable change in the nervous centres; while a certain number are dependent on disease of the brain. They have also noticed that in most cases of general paralysis without impairment of mind, the weakening diminution or abolition of the muscular irritability becomes more decided in proportion to the duration of the disease, while in those cases in which the reason is involved, both the muscular irritability and power of motion diminish, grow feeble, and are lost as functional disease advances. The indiscriminate application of galvanism for paralysis, which may depend on such a diversity of causes, and be met with under such a variety of circumstances, could not therefore fail to be followed by the worst possible consequences.

Dr. Todd proceeds next to comment on a case in which four epileptic attacks, followed by apoplectic effusion, occurred. From the first seizure, paralysis of the right side ensued, which the second increased, and the third complicated with loss of sensibility. On admission to hospital, in addition to the cerebral affection, mitral disease of the heart, and renal disease, were detected. The fourth fit, which proved fatal, was followed by paralysis on the *left side*. On a post-mortem examination double apoplexy corresponding to the double paralysis was discovered. The arteries of the brain were very generally diseased on both sides, confirming the observation of M. Bizot, that they are usually affected in a symmetrical manner. Dr. Todd particularly dwells on the connexion between the third stage of Bright's disease, or as he terms it, the *gouty kidney* and functional derangement of the brain. Dr. Lees has recently published a highly practical lecture on this subject, further confirmatory of Dr. Todd's views; and, at the same time, confirming us in the opinion we have ventured to express, that in the majority of cases, where paralysis supervenes in rheumatism or gout, the renal complication, not unfrequently their attendant, affords the probable explanation of the permanency of the paralysis, which we are disposed to regard as originally mechanical. The coincidence of diseased heart, and atheromatous deposits in the coats of the cerebral arteries, comes also under observation; a relation to which the writings of Mr. Paget, Professor Law, and others equally distinguished, have already directed attention. The conclusions drawn by Dr. Todd from the study of the various phenomena these examples present is, "that the majority of cases of apoplexy are best treated by purging, shaving the head and keeping it cool, perhaps blistering, and that bleeding is rarely applicable, except to the young, vigorous, strong, and plethoric."

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[a] Volume xiv. of our present Series, page 479.

Enlarging further on the connexion between the atrophic process perceptible in the minute blood-vessels, and the impaired condition of the cerebral structure they supply, we are satisfied that the association of the two conditions, the diseased blood-vessels bringing insufficient nourishment, and the weakened nerve matter affording imperfect support, explains the *rationale* of the development of many an attack of apoplexy, from which the patient may or may not recover, according to the extent of brain previously softened, or the amount of blood effused. This combination of disease, stated by Dr. Todd generally to occur in an advanced period of life, may, in many instances, be inferred from the detection of atheromatous deposits in the distant arteries, the existence of the arcus senilis, and impaired action of the heart, which are seldom absent, and whose presence, when conjoined, argues most unfavourably. The sudden supervention of death in an attack of apoplexy usually indicates that the clot involves, or is confined to, the mesocephale; while under such circumstances a very fatal symptom noticed by the author is the flapping of both cheeks in respiration, as showing the situation or extent of the lesion.

Respecting the management of delirium, Dr. Todd thus expresses himself:—" Remember I do not say *never* use a strait-jacket, but make its *necessity* the rule for its use; for in many cases it would be highly dangerous, and even fatal to the patient's life, to dispense with it." It is refreshing in this age of non-restraint disputation, to find so high an authority, in a few words, both faithfully and truly echo the sentiments of experience and wisdom.

The clinical history, pathology, and treatment of hemiplegia occupy seven lectures. We have no hesitation in declaring they afford the fullest account of that disease to be met with in this or any other language. The clearness of the views they advance, the truthfulness of their descriptions, and the sound practical tone manifest in every direction they convey, offer to the practitioner, whose means of observation have been limited, such a guide as he cannot too highly appreciate, while they, at the same time, afford remarks of no less value to those, who, from their greater intimacy with nervous lesions, are the better able to appreciate their excellence. We cannot do more than indicate a few out of the many valuable suggestions with which they abound. By the term, Hemiplegia, Dr. Todd denotes a palsy stroke, affecting either half of the body; the parts actually involved are the upper and lower extremity, the muscles of mastication, including the buccinator, and also of the tongue on one side. Paraplegia signifies paralysis of the lower half of the body, in which both legs, and perhaps some of the muscles of the bladder and rectum, are paralyzed. Hemiplegia, we are further informed may be either *complete* or *incomplete*, as regards motive power; there being also great variety as to the affection of the sentient power.

In the first, the upper and lower extremity of the same side exhibit complete loss of power of motion, the face and tongue being also much affected. In the second, slight stimulation produces active movements on the affected side. The fact of the patients suffering great pain from such stimulation, inclines Dr. Todd to the belief that a morbid sensibility is present. Those reflex actions occur chiefly, often exclusively, in the lower extremity. The facial paralysis in hemiplegia depending on the implication of the fifth and third nerve, differs from that resulting from disease of the portio dura, not only as regards its particular character, but also in the fact, that in the former the deformity is chiefly manifest on the sound side of the face. Palsy of the third nerve, not uncommonly, is a precursor of the hemiplegic attack, a circumstance to which most writers have directed attention. The tongue is, in this affection, protruded with a more or less distinct deviation to the paralyzed side. Deglutition is also sometimes impaired and in grave lesions, especially when of the inflammatory kind, the sphincter ani muscle is paralyzed,—a symptom which, when present, argues most unfavourably. Hemiplegia, it is stated, may be dependent either on a peripheral affection of the nerves, the morbid process spreading from periphery to centre,—a rare and an incomplete form of the disease,—or be caused by a lesion in some part of the brain or spinal cord. If this lesion be situated within the cranium, above the point of decussation of the pyramidal columns of the medulla oblongata, the palsy will be on the side of the body opposite to the lesion; this is the most common form met with. If it be seated in the spinal cord, below the decussation, the palsy will be on the same side of the body as the lesion; but in such a case, which is very rare, the phenomena present certain very essential points of difference from those due to cerebral disease.

The different forms or varieties of hemiplegia which Dr. Todd has met with in practice, are as follows:—First, and most commonly, the typical hemiplegia of diseased brain. Secondly, spinal hemiplegia caused by a lesion involving one half of the spinal cord, just below the decussation of the pyramids. Thirdly, hemiplegia consequent upon an epileptic attack, in which the paralyzing lesion is generally transient, and the palsy remains only a few hours, or at most a few days after the epileptic attack. This form Dr. Todd terms *epileptic hemiplegia.* Fourthly, hemiplegia following chorea, *choreic hemiplegia.* Fifthly, a peculiar and less perfect form in hysterical women, the *hysterical hemiplegia.* Lastly, a form, creeping, as it were, from periphery to centre, *peripheral hemiplegia.* In all these forms of hemiplegia, we learn that the paralysis is prominently a paralysis of motion, which may coexist with a sound or even exalted state of sensation. In general, however, sensation is more or less impaired. The condition of the muscles, in cases of cerebral hemiplegia, is ranged in three classes. In the first, the muscles of the paralytic limbs are completely relaxed. In the second, the paralyzed muscles exhibit a certain amount of rigidity, *which rigidity has existed from the moment or soon after the attack.* In the third class, the rigidity does not occur for some time after the paralytic seizure. Dr. Todd impresses again the necessity of directing attention to the condition of the circulating organs in all cases of cerebral hemiplegia. The researches of Dr. Kirkes and of Virchow, have shown that disease of the central organs of circulation may by the detachment of plugs of fibrine from their inner surface, cause obstruction of the principal cerebral artery and so produce this disease, as the consequence of the cerebral softening which thereupon ensues. Simple hemiplegia, with relaxed and flaccid muscles, presents two varieties, the *first* occurs without loss of consciousness; the second, along with more or less of coma. The forms of hemiplegia met with in the early periods of life are, the simple, choreic, epileptic, and hysterical. The condition of the paralyzed muscles is the basis Dr. Todd proposes for the arrangement of his cases, inasmuch as they best indicate the character of the nervous force. Lallemand and Durand-Fardel have also paid particular attention to the muscular symptoms; while Rostan and Andral regard spastic rigidity as almost pathognomonic of softening. The pathology of the first form of hemiplegia is, by Dr. Todd, believed to depend on defective circulation through the brain, and enfeebled nutrition of the cerebral matter. In some instances, actual obstruction of important arterial channels can be shown; in others, there is a marked degeneracy of a large portion of the arterial and capillary system which may have preceded or gone on simultaneously with the cerebral degeneration. In all cases, consequent on the cerebral disease, the vesicular matter imperfectly generates the nervous force, and the fibrous matter becomes a bad conductor of it, or it may be, that, consequent on the possible rupture of the nerve fibres, it is rendered thereby inadequate to do so. The views of Dr. Todd fully bear out those of Professor Rokitansky, in reference to disease of the vessels, as a cause of this affection. The researches of Abercrombie, Kölliker, Hasse, Sibson, Ormerod, Paget, and others, also confirm the same opinions. Though less frequently, hemiplegia has been still met with at a very early age, in cases described by Kirkes, Burrowes, and Paget. If it be admitted that disease of the arterial system may occasion such a remarkable change in the cerebral structure, and an equal non-resistant or frangible condition in the coats of the vessels, why does not a fatal hemorrhage more frequently occur? The answer to this inquiry is;—The relation of the force exercised on the vessel, and the support afforded to it, are in a great measure equalized. The softening results from a deficient circulation, and the deficient circulation insures the safety of the morbid vessels. Experience demonstrates that, where arterial disease exists, and, owing to some exciting cause, an hemiplegic attack comes on, the most unfavourable result may be anticipated. The treatment of cerebral hemiplegia Dr. Todd advises is, to keep down the frequency and force of the heart's action. For this purpose, he recommends the strict maintenance of the horizontal posture, purgation by enemata, or, should they fail, the exhibition of croton oil or calomel, conjoined with the use of some slight alkaline corrective—ammonia being on the whole the most appropriate. Bleeding is rarely admissible. Hemiplegia *with early rigidity of the paralyzed muscles* is met with under two forms; in one, the rigidity of the muscles is very slight, and confined to one or two muscles; the other, in which it is considerable, and affecting all, or nearly all, the muscles. Dr. Todd believes that where there is no rigidity, the clot lies in the midst of softened brain, and has not, in any degree, encroached upon sound brain, but when rigidity exists, the clot has extended beyond the bounds of the white softening, and has torn up, to a greater or less extent, sound brain. In reply to the inquiry;—Is a paralyzing lesion compatible with an irritative one?—an affirmative answer may be readily given. Lallemand has remarked, an early stage of the inflammatory process may be irritative and paralyzing; a later stage paralyzing simply. The occurrence of hemiplegic convulsions in women during pregnancy and after parturition, is illustrated by a case in which death supervened. For a full description and much highly valuable knowledge on this obscure form of disease, we may refer to Dr. Churchill's able essay "On Paralysis occurring during Gestation and in Childbed," published in our last number.

The view which Dr. Todd takes of the pathological condition of the brain in a case of hemiplegia with *late rigidity* of the muscles, is as follows:—

> "At the seat of the original lesion, whether it be simply a white softening, or an apoplectic clot, or a red softening, with more or less destruction of the brain substance, there takes place an attempt at cicatrization more or less perfect. Attendant on this there is a gradual shrinking or contraction of the cerebral matter, which acting on the neighbouring healthy tissue, keeps up a slow and lingering irritation, which is propagated to the muscles and excites in them a corresponding gradual contraction, while at the same time their nutrition becomes seriously impaired by the want of proper exercise, and the general depressing influence of the lesion."

Cases in support of this view, from the author's own practice and from that of M. Andral and of Romberg, are quoted. Dr. Todd observes that he is far from asserting it is *proved* that late rigidity is due to a cicatrizing process in the brain, but offers the doctrine, and we do not hesitate to receive it with all the confidence with which his work has deeply impressed us.

Peripheral hemiplegia indicates, by its name, the most prominent feature of the affection. The paralysis in such cases, though at first of a hemiplegic character, after a time generally involves both sides of the body. This form of disease was long since described by Dr. Cheyne under the name of creeping palsy, which, on the dissection of a case presenting its extreme characters, was found to be associated with a general softened condition of the cerebral structures. The late Dr. Graves, in the chapter on paraplegia in his Clinical Medicine, has also noticed the progression of paralysis from impressions on the peripheral extremities of the nerves. Dr. Stokes had directed attention to similar phenomena. MM. Lunier, Esquirol, and Georget, have published their observations on progressive general palsy, as a complication, or rather termination of insanity, and yet the essential cause of this affection has remained exceedingly obscure. Dr. Todd confesses his inability to offer any satisfactory hypothesis as to its pathology, but inclines to the opinion that it consists in some degree of atrophy of the nerves of the extremities, with a similar condition of some portion of the brain, either of which may stand to the other as cause to effect. The importance, and at the same time the occasional difficulty of diagnosing paralysis from brain lesion from hysterical paralysis is again impressed by Dr. Todd, who observes that in some instances they may coexist, and limbs really paralyzed have much of the hysterical apparent lifelessness, When, however, the affections are distinct, their differential diagnosis rests in the peculiarity of hysterical constitution, the absence of the signs of lesion of the nervous centres, and the characters of the paralysis itself.

Dr. Todd particularly alludes to the occurrence of very curious and interesting involuntary movements, sometimes witnessed in hemiplegic cases: they may be observed simultaneously with yawning, and less frequently with the actions consequent on emotion, surprise, joy or pleasure, or grief, as in laughter or crying. This fact, we conceive, may be considered as mainly diagnostic between their organic and hysteric origin. Other writers have alluded to similar phenomena. Dr. Rowland has described automatic movements occupying a middle station between convulsion and contraction, which are frequently repeated, and wholly beyond the control of the patient. Rostan has observed the hand to shut and open alternately. Lallemand had a patient whose left arm and hand were continuously agitated with movements of flexion and extension. Such movements, whatever be their pathological or physiological nature, we have observed to be materially increased previous to the recurrence of those convulsive paroxysms dependent on softening of the cerebral structure.

Epileptic hemiplegia is a form of disease that the observations of late years more especially have enabled us to rightly appreciate. Paralysis following epileptic paroxysms has been particularly noticed by Dr. Stokes, in connexion with diseased heart. Dr. Fleming has also detailed a case in which pseudo-apoplectic paroxysms generally came on during sleep, and from each of which attacks the patients usually recovered perfectly paralyzed on one side. Dr. Gouch long since directed attention to an analogous form of convulsion in anemic children, and pointed out the danger of their depletory treatment. M. Lisle has particularized this character of palsy, accompanied by general or partial epileptiform convulsions in the insane, and impressed the danger of blood-letting in its treatment; so that our general experience leads us to reject the idea that such a form of disease is dependent on congestion, an opinion in which Dr. Todd fully coincides. Having offered equally valuable observations on spinal hemiplegia, and dwelt at some length on differences between the progress, treatment, and general termination of those several forms to which we have alluded. Dr. Todd observes:—"In all cases of paralysis, but especially in cases of hemiplegia, be particularly cautious in giving a prognosis."

A case of epileptic coma and lead poison elicits from the author many important practical suggestions, the more deserving of note as the disease to which they apply is one of by no means uncommon occurrence. In the case recorded, two circumstances induced Dr. Todd to believe that no serious lesion existed in the brain: the first of these being, that the coma was accompanied by epileptic convulsions without hemiplegic paralysis,—the second, that the patient's urine was scanty in quantity, and highly impregnated with albumen. On these grounds Dr. Todd regarded the case as an example of *renal epileptic coma*, and adopted a treatment actively eliminatory, with a view to remove by other channels than those of the intestinal mucous membrane and the skin the material which was irritating the brain. This case is particularly interesting, for, though the patient presented all the well-known characters of that form of palsy known as the "painter's wrist drop," he was not of that trade, but of such a vocation as did not expose him to the lead contamination. It appeared, however, that a part of his duty was to clean and keep bright the pewter pots belonging to a public house to which he was attached; this he did by friction with his hands. "Now," writes Dr. Todd, "pewter very commonly contains lead in considerable quantities; and no doubt the frequent contact of this with the hands would lead to gradual absorption of a sufficient quantity of the metal to produce the poisonous effects, or the repeated frictions might cause the separation of minute metallic particles, which might be inhaled."

We have here demonstrative proof of the influence the actual contact with the poison exercises in producing a more decided palsy in the upper rather than the lower extremities, sufficient to confirm us in the belief already before expressed, that it is the actual contamination of the muscles rather than their increased circulation which determines the palsy to those situations in which it is principally observable. We fully accord with Dr. Todd's views respecting the *rationale* of the method in which the poisoning of the general system is accomplished, but are disposed to attach great importance to actual contact in rendering the disease so much more prominent in those structures in which it is usually most manifest. Dr. H. Gueneau De Mussy, in a former Number of this Journal, published highly interesting details of the poisonous results of lead when immediately received into the system. His observations were derived from the effects witnessed in Claremont, where the water was conveyed a long distance in leaden tubes, and allowed to rest in leaden cisterns. Though the symptoms manifested fully explained their source, paralysis of the upper extremities was not amongst those prominently present.

The coincident operation of two affections, either of which was fully capable of producing paralysis by a similar means—poisoning of the blood—was most interesting, as illustrating the reality rather than the nosology of disease. In its treatment, as in that of the numerous other cases whose accurate detail renders this an essentially clinical, and therefore a practical work for reference, Dr. Todd demonstrates how much can be accomplished by the energetic application of suitable means.

The researches of Drs. Bright, Rees, Lees, and others, have afforded us much information respecting the form of renal hemiplegia, to which the author here alludes. They have recorded some cases in which convulsions and death have occurred without a trace of dropsy to direct attention to the primary seat of the disease, while in others, urea had been obtained from the blood, where no symptoms of uremia were present. Admitting, then, the importance of Dr. Todd's direction, that in all cases of hemiplegia, the analysis of the urine is of the greatest importance, we must at the same time be prepared to meet exceptional cases in which the information derivable from such a source may fail to direct our opinions respecting the essential nature of the affection.

Dr. Todd remarks that in this, and two other cases of renal epileptic coma, he had sought in vain for the presence of carbonate of ammonia in the expired air and in the blood, as suggested by Frerichs. Our experience leads us to regard this test, if we may so call it, as of little practical importance, for the purpose of either diagnosis or treatment, inasmuch as, in the best marked cases of the disease we have witnessed, it was altogether absent, while in others its existence could not be considered as of special value.

The length to which our observations have extended prevent us affording to our readers any account of the author's valuable remarks on diseases of the dura mater, chorea, local hysteria, and on catalepsy. For these, and a further detail of many instructive truthful cases, we must refer them to the work itself, which we doubt not will be found in the study of every practical physician. Such observations as our analysis of Dr. Todd's writings has elicited have, it will be perceived, been rather suggestive than critical; we feel we should be wanting in our duty to those who, not having the opportunity of judging for themselves, may be guided in their estimation of any publication by our opinion, did we not declare that those "Clinical Lectures on Paralysis, Disease of the Brain, and other Affections of the Nervous System," in their fidelity of description, soundness of doctrine, and practical value, have seldom been equalled, and never surpassed.

Class Book of Botany: being an Introduction to the Study of the Vegetable Kingdom. By J. H. Balfour, M.D., &c., Professor of Botany in the University of Edinburgh. With upwards of 1300 Illustrations. Edinburgh: A. and C. Black, 1854. 2 vols. 8vo, pp. 1114.

The study of botany, one of the most interesting sciences to the natural historian, constitutes an important branch of medical instruction; unfortunately, however, while fascinating in the extreme to some who only regret that the varied and numerous branches of medicine to which they are compelled, in their short days of studentship, to devote themselves, prevents them from acquiring more than a mere outline knowledge of it,—to the majority it is equally distasteful, and the time of necessity bestowed on it regarded as wasted from more practical pursuits. The teachers of botany in medical schools are, consequently, placed in much difficulty in endeavouring to simplify its study and find out an easy road for the student whereby to learn a sufficiency of the science as it bears on medicine. To this Professor Balfour has, from his first appearance as an author, devoted his great talents; and in his original work, reprinted from the "Encyclopædia Metropolitana," he furnished a most complete yet not too bulky text-book for the professional or non-professional student. Owing, however, to some unfortunate difference of opinion with his publishers, he refused to edit or sanction the second edition of that work; and the volumes now before us can alone be regarded as *his own* book.

"Its object, is," he informs the reader in his Preface, "to initiate the student into the structure, functions, classification, and distribution of plants." And certainly no work in the English language is better calculated to do so; well arranged, clearly and elegantly written, it leads him on, by gradual steps, from an inquiry into the simple structure of the vegetable kingdom, to the knowledge of the important part which plants fulfil in the beautiful economy of our material world.

> "The FIRST PART embraces vegetable organography, or a description of the tissues of which plants are composed, and of the various organs which are concerned in the processes of nutrition and reproduction, without an accurate knowledge of which it is impossible to make progress in botanical science. The SECOND PART includes vegetable physiology, or the consideration of the functions which plants perform in the living state. The THIRD PART has reference to the classification of plants,—the essential characters of the classes and orders being given along with the properties of the more important species, especially such as are used in medicine or in the arts. In the FOURTH PART the distribution of plants is considered in a geographical point of view; and in the FIFTH PART the subject of fossil botany is discussed. Directions in regard to the examination and preparation of plants for the herbarium, museum, and microscope, and an explanation of the common botanical terms, are added as an appendix."

Such is the author's outline of the contents of this treatise, and from it our readers may learn how complete the work is in all respects; in addition to which we have only to add, that a more beautifully or more bountifully illustrated book we have never opened; in short, the only fault we can find with Professor Balfour's Botany is its bulk,—a fault which we fear will keep it out of the hands of many a student of medicine, and compel him to study from smaller and perhaps inferior works.

The Indian Annals of Medical Science; a Half-yearly Journal of Practical Medicine and Surgery. No. I.—October, 1853. No. II.—April, 1854. Calcutta: Lepage and Co. 8vo. pp. 768.

SEVERAL attempts have been, from time to time, made to establish medical journals in the great capitals of our Indian empire, but from some cause or another they have hitherto been all failures, although several of them were well edited and possessed many excellencies; nevertheless, we are sanguine enough to predict a long life for the one of which we have received the two first Numbers, and whose title is given above. To judge from these two numbers, we are of opinion that a most valuable addition is hereby made to the medical periodical literature of the English language, and that our knowledge of the diseases which are peculiar to our vast possessions in India will be much increased. It is intended by the editors "to publish annually an original Report upon one of the more important and prevalent of the diseases of tropical climates." The first portion of a most able Report on dysentery by Dr. P. Bleeker has already appeared; and if we are to augur from the character of it, the value of these Reports will be great indeed, not only to the medical practitioner in India, but at home. In the first part, too, is contained a most interesting account of the medical customs and diseases of the Burmese, to which we hope to refer on a future occasion. The number and variety of the original communications are even greater in the second than in the first part. Amongst them we especially notice a most able Report by Mr. Taylor, surgeon of H. M.'s 80th regiment, on the medical history of that corps, while engaged in the late Burmese war; and we cannot refrain from quoting from it the following practical commentary on the worse than absurdity of our soldiers' dress,—a point which the present war in the East has at length brought under public notice so forcibly that we may expect ere long to see the tortures thereby occasioned to the British soldier remedied:—

"On the afternoon of the 4th April, or nine days after arrival at Moulmein, the wing of H. M.'s 80th regiment, with the Head Quarters wing of the 18th Royal Irish, and other troops of the H. C.'s service, were crowded on board three steamers, which then moved up the river Salween, to be ready for the storming of Martaban the next morning. That morning, the 5th of April, proved exceedingly hot; though it was early when the storming party, formed of the Grenadier companies of the 18th and 80th, under command of Captain Christie, of the latter corps, took the river side defences of the enemy, yet the landing of the whole force having to be effected in small boats, the sun was well up before the disembarkation was accomplished. The enemy had then to be pursued over a succession of steep hills, covered with jungle and brushwood, making the heat of the midday tropical sun extremely unbearable. *In considering the oppressiveness of such exertion in this climate, the close-fitting cloth jacket, leather stock, cross-belts, with heavily laden pouch, and the musket, must not be overlooked. Altogether the exposure and fatigue incurred this day by the men were terrible. Many dropped faint, exhausted, and vomiting, whilst some fell insensible, or with epileptic fits.*"

The Microscope, in its Application to Clinical Medicine. By
LIONEL BEALE, M.B., &c. London: Highley, 1854. 12mo,
pp. 303.

A WANT in English medical literature, much felt for some years back by both the student and the practitioner, is here well supplied by Dr. Beale. The rapid advancement which microscopical investigations as applied to practical medicine and surgery have lately made, and the new light which has been thereby thrown on the nature and diagnosis of many obscure diseases, render it absolutely necessary that the medical man should possess not alone a knowledge of the results which have been arrived at by the employment of the microscope, but that he should become practically acquainted with the use of the instrument itself, and also the essential points in its construction and manipulation. In large cities it is true that the busy practitioner may content himself with referring microscopical investigations to those who are found to devote themselves specially to such pursuits, and thus save the time of which he has so little to spare; but in country districts it is altogether essential that the physician and surgeon must himself be able to examine microscopically the urinary and other secretions, tumours, and morbid growths, &c., and apply this instrument when required in medico-legal investigations.

The work before us, which is based on a course of lectures delivered to his students by the author, contains all the information requisite for those desirous of studying the use of the "Microscope, in its Application to Clinical Medicine;" and this, too, conveyed in a small compass, yet combining clearness with conciseness,—Dr. Beale exhibiting a most commendable freedom from a vice prevailing much amongst the medical writers of the day, that of *book-making*. The volume may be said to be divided into two parts, the first of which, chapters I. to VIII., is devoted to general observations on the microscope, including its nature, construction, and mode of employment, together with directions for preparing and preserving objects to be examined; and the second, chapters IX. to XVII., describes the method of examining the various structures and secretions of the body both in health and disease, and the results which have been already thereby arrived at.

As the book does not admit of any general analysis of its contents, we must be satisfied with recommending it in the strongest terms to our readers, and offering Dr. Beale our warmest thanks for the publication of so useful and so excellent a manual.

PART III.

MEDICAL MISCELLANY.

TRANSACTIONS OF THE ASSOCIATION OF THE FELLOWS AND LICENTIATES OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

SESSION 1853–4.

First Meeting, November 3rd, 1853.

Dr. Lees described a case of "epigastric neuralgia," which was treated successfully by the infusion of valerian and cinchona, and the local endermic application of morphia. In his comments on this case, Dr. Lees alluded to the observations of Dr. Gueneau de Mussy on local tenderness occurring in diaphragmatic pleurisy, as also to that variety of rheumatism in the skin which M. Beau has termed "dermalgia," and pointed out the difference between the case he described and these affections[a].

Dr. Neligan related the following case:—

Thomas Bolger, aged 38, a labourer in chemical works, was admitted into Jervis-street Hospital, June 15, 1853, complaining of superficial pain in the epigastric region, attended with a swelling. He stated that about sixteen days since, on returning home from work, he felt for the first time a sensation of soreness over the pit of the stomach, which was much increased by pressure, stooping his body forwards, or bending to either side. On the following day he perceived that the tender part was slightly swollen, and the pain much increased. The swelling remained much the same, but the pain became most agonizing during the ensuing week, totally incapacitating him from the least exertion; nevertheless, his appetite and general health were totally unaffected. He sought medical advice at this time, and was blistered over the painful spot several times, but without experiencing the least relief; he therefore obtained admission into hospital. On examination, a rounded tumour, about the size of a small orange, was visible, occupying the space just below the cartilages of the true ribs on the right side; it was not much elevated above the surface; and on palpation, which was, however, performed with much difficulty, owing to the extreme pain thereby occasioned, no sense of fluctuation could be perceived; no discoloration of the surface existed. The pulse was 92, soft and compressible; the tongue coated and dry; there was no thirst; the appetite was good; and the bowels were regular, the stools being tinged naturally with bile.

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[a] Published at length in the first Number of the Dublin Hospital Gazette.

The symptoms were diagnosed to be dependent on inflammation of the posterior sheath of the upper division of the right rectus muscle, with tendency to the formation of matter behind the muscle. It was treated, accordingly, with relays of leeches, followed by hot linseed meal cataplasms and the internal administration of the muriate of morphia. On the 25th, the tenth day after admission, it is reported that the pain and swelling had gradually decreased, until the former is no longer complained of, and the latter is not visible: being anxious to return to his employment, he was dismissed on this day.

On the 1st of July this man was readmitted into hospital with symptoms precisely analogous to those present on his former admission, with the addition of there being a peculiarly tender point in the centre of the tumour, attended with an obscure sense of fluctuation; the patient also complained of great throbbing in the part. Leeches were applied, with constant poultices of linseed meal, for the following week, until the 9th instant, when the swelling having continued to increase, and the pain being, as he said, quite unbearable, an incision was made with a lancet in the centre of the tumour, nearly, but not quite through, the fibres of the rectus muscle. No matter followed, but on the following day there was a copious flow of thin bloody pus, odourless, which gushed out on coughing or making a deep inspiration. This discharge increased in quantity for the next ten days, amounting at times to at least five or six ounces in the twenty-four hours; it then gradually diminished, and on the 23rd of July, the incision being quite healed, he left the hospital, and there has been no return of the pain or discharge since.

Dr. Neligan remarked that this case appeared to him to afford a practical commentary on that just related by Dr. Lees, and on others of a similar nature, which were commonly regarded as "epigastric neuralgia," but which he believed to be most usually examples of the early stage of the affection which existed in the case he had just related. The diagnosis here was in the first instance attended with much difficulty, not in distinguishing it from a neuralgic affection, but from disease of some of the abdominal viscera, and was chiefly based on the suddenness of the attack and the very slight disturbance of the general health which existed. The result of the treatment by poulticing and leeches during the first period of the man's residence in hospital was highly satisfactory, and it is more than probable that had he then remained for a longer period there would have been no formation of matter. The repeated application of leeches in the case narrated by Dr. Lees also effected a cure, a further argument for the view taken by Dr. Neligan of the nature of those cases described as "epigastric neuralgia," and which are unattended with neuralgic symptoms in other parts of the body, or the peculiar general features so invariably attendant on neuralgic diseases.

Dr. Henry Kennedy observed, "that it would be most important, if possible, always to know the causes of jaundice, but in many cases it must be admitted we are quite in the dark on this point. Speaking generally, there can be no doubt that any form of obstruction in the neighbourhood of the liver, and more particularly if affecting the ducts, is capable of causing this appearance. In many cases of jaundice the bile, or some of its constituents, is at length absorbed, and acts injuriously on the system. But there are others in which nothing of this sort exists, and yet the affection may be not only well marked, but may turn out to be one of the most fatal which it is our lot to meet with in practice. Allusion is now made to those cases which by some have been called black or green jaundice,—a subject which has been very ably treated by Sir H. Marsh; though, strange to say, it is scarcely alluded to by Dr. Watson in his Lectures. It is to this form of the disease that I would more particularly direct attention. In the course of years I have happened to have met some instances of it, and as its proper treatment has yet to be determined, I thought it would not be out of place to bring it under notice. Before making a few remarks on the subject, I shall detail those cases of the affection which have come under my own notice.

"Case I.—A young man, twenty-five years of age, did not feel well after having eaten heartily of bread and butter, cheese, and ale. He continued at his business, however, for four days; but then took to his bed, having a slight yellow colour of his eyes, and very slight sickness of his stomach, but not amounting to vomiting. I should state he had been previously in perfect health, and was able to walk a considerable distance to reach his bed. In the course of the night following the day he lay down, he suddenly became insensible; this state was very soon succeeded by a kind of fit, in which he was more like a person suffering from colic than from an actual convulsion. The fit recurred every half-hour, and had he not been prevented he would have fallen out of bed during their operation. This state of things continued to increase till six o'clock of the evening of the next day; that is, as nearly as may be, fifteen hours after he had become insensible. At this period I first saw him through the kindness of my friend, Surgeon Irvine. The patient was a remarkably well-made man, and in good condition. He was in a state of the most profound coma; his pupils largely dilated and fixed; pulse 86, full and bounding; abdomen presenting a slight degree of tympanitis; the entire surface of the body was deeply jaundiced. About three times in every hour he was seized with a fit, which then was evidently convulsive, and presented a well-marked opisthotonos. The bowels had been very freely moved in the course of the day. Three hours later, that is, at nine o'clock in the evening, every symptom had increased in intensity. The pulse had now become irregular; there was a clammy sweat over the body, and the convulsions were of the most violent kind,—he was literally turned in the bed at each paroxysm. At this period, too, he threw up, very suddenly, a large quantity of black vomit. In this way every symptom went on increasing until six o'clock in the morning, when he expired, that is, forty-two hours after he was able to walk to his bed. On making a post-mortem examination I could find nothing to account for such violent symptoms. Any serum found was tinged yellow: the stomach contained a quantity of the same matter thrown up during life. The gall-ducts were quite pervious; close to the entrance of the common duct into the intestines there were five or six punctated spots. All the cavities were examined.

"Case II.—A porter's wife, about thirty-five years of age, and between four and five months pregnant, began to complain of some sickness of stomach, at the same time that she was observed to become yellow over the surface of the body. After about thirty-six hours she became insensible; and then it was I first saw her, with Mr. Torney, of the Blackhall-street Dispensary. She was profoundly comatose; yet, at times, it was clear she felt uneasiness of some kind; for she would then become restless, and moan deeply. Her pulse was 56, steady and full; the pupils were fixed, and dilated, but not to the fullest extent; her bowels had been well freed through the day, but without consciousness. The next morning, that is, fourteen hours later, she was very much worse: the pulse had become weaker and quicker, and the extremities had a tendency to get cold, while the surface was covered with sweat. The hue of the body was of a greenish yellow; in some places much darker than in others. There was no sign whatever of miscarriage. Some hours later than this she sank; that is, in about four days from the time she first complained of sickness of the stomach. In this instance there was no examination.

"Case III.—In the course of the past summer, while doing duty for Dr. Banon, at the Richmond Prison, a boy, fourteen years of age, was committed, who laboured under well-marked jaundice, at first sight of the ordinary kind. I found, however, that he was very heavily ill, and complained of being very weak; and evidently wished not to be disturbed in any way. His pulse was 66, of moderate strength; his tongue red, and not much furred; his chief complaint was of pain, which he referred to the stomach; pressure was intolerable over that region; and he vomited everything he took, including even a mouthful of cold water. This vomiting could not be controlled, though I used every means possible to allay it. What he threw up at first presented no remarkable appearance; but in the course of two days it gradually became darker and darker, and finally presented all the characters of black vomit; the quantity likewise being very considerable. From the very first day of admission he was what might be called heavy; as the disease progressed, however, he gradually became more and more insensible, and scarcely to be roused. I then observed that he lay in the bed with his head drawn back, just as we see in some cases of hydrocephalus, or infantile fever; with this he showed a well-marked tetanic expression of face; convulsions then set in, and so the scene closed. Towards the last, but only then, the pupils became dilated. For twenty-fours before death I could detect no pulse at the wrist. On examination some congestion of the vessels of the brain was found, together with serous effusion; but both were in a slight degree. The stomach was discoloured with some of the dark stuff he had thrown up during life; but on wiping this away the membrane appeared quite healthy. The liver gave the idea of the bile-ducts in it being congested; but there was no sanguineous congestion, nor enlargement. The gall-bladder was contracted, and contained some bile of a thicker consistence than natural. The gall-ducts were all pervious. Nothing else of note was found. This boy lived six days from the time of admission.

"Such is a very brief sketch of three fatal cases of this formidable affection which came under my own immediate notice. In another case, of which I have only the following note, recovery took place after insensibility had set in.

"Case IV.—The patient was a woman, forty years of age, residing in a room in Abbey-street; she had laboured under jaundice for at least four days previously; had got heavy and stupid; and passed into a state of insensibility. Her body was now deeply jaundiced; her pulse 66, and full; and she lay to all appearance comatose. It was not, however, to an extreme degree; for she evidently revived on pinching the skin; and when drink was put into her mouth, though it lay for a moment, it was subsequently swallowed. This woman rallied from this state, then relapsed again, but finally recovered.

"In one other instance of this disease, affecting a boy of seventeen years of age, for two or three days there was a marked tendency to coma. It never, however, passed into that state, and this boy also recovered.

"Such is the experience I have had of this form of jaundice; and the cases given afford, I believe, a fair representation of its ordinary course. For when it assumes this severe character it would appear to be very uniform in its progress. It is not easy to witness cases of this kind without the question arising—How does it happen that so many cases of ordinary jaundice occur, where there is every reason to suppose that the bile pervades every part of the system; and yet we see none of those serious effects which have been described in these remarks? I need scarcely add, that for one fatal case we meet numbers where no danger arises. I had once the impression on my mind that it was on account of the rapidity with which the bile saturated the system that the danger arose: taking the constitution as it were by surprise, just as happens in some of the acute affections of the chest. But a more enlarged experience has shown me that this idea is erroneous. I have seen cases of fever where jaundice appeared very suddenly, and yet no mischief ensued; and not long since, in the case of a lady affected with gallstones, and who was seen also by Mr. Cusack, jaundice came on suddenly, after a very severe attack of pain, and in the course of ten hours had reached its height. Neither in this case did any alarming symptoms declare themselves; so that the suddenness of the attack cannot be set down as the cause of this serious disease. Waiving this, then, it has occurred to me that possibly an explanation might be found in the idea that it is only a much deteriorated bile the absorption of which would cause serious consequences; and the more I have considered it the more plausible this idea appears to me to be. Except as bearing on this point, it would be quite unnecessary to direct attention to the marked differences which the bile presents at different times; and I know instances commonly occur where extraordinary, not to say alarming, symptoms have been caused by the presence of morbid bile, and which have disappeared suddenly when this bile has been got rid of. Is it straining the point too far to suppose that the absorption of such bile would give rise to the class of fatal symptoms to which attention has been already drawn? It will be recollected, too, that the hue which the body presents in these fatal cases has actually given a name to this particular form of disease: for it has been called black or green jaundice. To some extent this bears out the idea I venture to put forward.

"The symptoms present in two out of the three fatal cases detailed are probably worth a passing notice. It will be recollected that the state was one of profound coma, alternating, and more particularly towards the last, with convulsions—and these of the tetanic character. In the case of the man aged 25 there existed that very peculiar movement of the arms by the side of the head; whilst in the boy's case the face presented the well-known features of tetanus. I need scarcely observe, that these symptoms are not confined to this affection alone; the coma and convulsions are to be seen in some cases of scarlatina, and in ordinary fever. The analogy, in fact, is complete on this, as on so many other points of acute disease.

"Whilst detailing the previous cases I purposely omitted any notice of the treatment which was adopted in each; nor, in truth, am I able to offer the slightest suggestion as to what holds out the best prospect of success. In each of the three fatal cases mercury was actively employed, both internally and externally. In the two first salivation was not induced; nor, indeed, from their great rapidity, was there time to have caused it. In the boy's case, however, a free salivation ensued; still, it did not appear to influence the disease in the slightest. On the other hand, the last case, which

I saw with the late Dr. Curran, was salivated, and she, it will be recollected, recovered. I would be far from saying, however, that this was due to the mercury. With the mercury active purgation was also adopted in each instance; and in the first case croton oil was used for that purpose. I have somewhere read that the most active purging holds out the best prospect of success in these cases; in the man's case it was actively pursued, though unavailingly. The second and third cases were also as freely purged as prudence would justify. The boy of 14 complained so much of deadly weakness, and his pulse was so feeble, that nothing like active purging was used with him. In fact, he got round from the second day of my seeing him. Together with these measures active blistering was adopted in all.

"In the second case, that is, the woman's, who was pregnant, the idea of bringing on premature delivery occurred to my mind; but the symptoms increased so rapidly as to cause me to give it up. She died without having shown any signs of abortion.

"The discharges from the bowels in all the cases, though probably of a lighter colour than what is natural, were by no means free of bile. In the boy's case they were, in fact, unnaturally dark and unhealthy-looking."

SECOND MEETING, DECEMBER 4TH, 1853.

DR. STOKES read a discourse on the "Life and Writings of the late Robert James Graves, M. D., F. R. S"[a].

THIRD MEETING, JANUARY 4TH, 1854.

DR. AQUILLA SMITH read the particulars of a case of abdominal tumour, accompanied by copious effusion into the peritoneal sac.

"Jane Grogan, a servant, aged 18, was admitted into Sir Patrick Dun's Hospital, the 14th of October, 1853. The next day she presented the following appearance as she lay in bed:—Abdomen very much distended; lower ribs expanded; umbilicus not protruded; a few cicatrix-like marks in the skin, the effect of distention, just above Poupart's ligament on the right side only; fluctuation very distinct on percussion, and when the fingers were pressed suddenly and deeply into the right iliac region, a tumour was perceptible

"On making a vaginal examination the uterus was felt high up and gave little resistance to the touch; the posterior wall of the vagina felt rugose, flaccid, and thickened, like as in vaginal cystocele, which led me to ask the patient if any tumour protruded when she was standing erect; she replied that for the last three months, whenever she stood up, or walked about for a few minutes, that a tumour protruded, but that it disappeared in a short time after she lay down. She frequently felt sharp stinging pains through her abdomen; she never menstruated; the mammæ were undeveloped like a child's;

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[a] Published at length in the Medical Times and Gazette, January 7, 1854.

limbs small; hair fair; eyes light blue; face pallid, but not haggard; pulse 80; tongue clean; appetite good; bowels occasionally relaxed; her feet never swelled. About a year since her abdomen began to enlarge, and increased so gradually, that it did not give her any concern until her attention was directed to it by her fellow-servants. She was then sent to Dublin, and on the 8th of last August was admitted into the Meath Hospital, where she remained under treatment for more than two months.

"When the girl came under my care she was fretted and in low spirits in consequence of the imputation on her character, as she was suspected of being pregnant; she was much troubled with flatulence, for which she was treated for a few days, and relieved by a mixture consisting of infusion of calumba, bicarbonate of soda, and tincture of orange peel.

"October the 22nd, eight days after her admission, my friend Dr. Dwyer (accoucheur to Sir Patrick Dun's Hospital), examined the patient, and concurred with me, that the tumour, about the size of a small orange, which protruded, was the cul de sac of the peritoneum, between the rectum and vagina, which was distended with the abdominal fluid; its surface was red and appeared tense, but on the application of gentle pressure the tumour gave little resistance, and readily disappeared, but returned immediately after the patient walked about the ward. The degree of tension was not increased by pressure on the abdomen.

"I proposed to puncture the tumour with a lancet for the purpose of drawing off the fluid gradually, and with less pain and danger than would arise from the ordinary operation of tapping the abdomen with a trocar. I suggested this treatment in order to relieve the patient from the feeling of distention, which latterly caused some distress in breathing, and also for the purpose of being enabled to make a more satisfactory examination of the tumour, which I had already detected.

"Dr. Dwyer having assented to my proposition, I passed the index finger of my left hand behind the pubes in order to fix the tumour, so as to afford sufficient resistance to the introduction of the lancet, and I may here observe, that for want of resistance I think it would not have been possible to have punctured the tumour with a trocar. A few drops of blood followed after the puncture, and on passing into the wound a silver probe it was stopped apparently by a tense membrane; the lancet was again introduced, and immediately a pale, straw-coloured, viscid fluid passed out in a continued stream to the amount of a few ounces, when the patient, who was standing up, became alarmed and weak, and was obliged to be laid on her bed, the fluid then ceased to flow, the change of position having altered the relation of the opening in the peritoneum to that in the posterior wall of the vagina. The feeling of distention was somewhat relieved, and we determined to let the patient rest for the present, and ordered one drachm of the solution of muriate of morphia to be given at bed-time.

"October 23rd. When I visited the hospital at 10 o'clock the patient was up and dressed; she passed a good night, and without any discharge from the opening. On examining the tumour it presented the same appearance as it did the day before; the small incision was closed, and I attempted to open it with a sharp-pointed silver probe without success. I then fixed the tumour, as in the first operation, and passed the lancet up to its shoulder, when a stream of fluid about the size of a common quill immediately flowed in a continued stream into a large basin which was placed between the patient's feet. The girl, not being apprehensive of pain, or in any way alarmed, remained standing until the basin was filled. I then had her placed on the night-chair, and in less than half an hour the pan, which contains about six pints, was filled; it was removed and another put in its place, and within an hour from the time of the operation three pints more had passed, making altogether about fifteen pints. I ordered the patient to bed, and to be kept very quiet until my next visit, at 3 o'clock, P. M., up to which time no more fluid had passed. Her abdomen was soft and relaxed, and a tumour was very perceptible in the hypogastric region, but I abstained from handling it; pulse 84; some pain had been felt, but it was evidently caused by flatus, and the girl remarked that she could not cough as freely as before the operation, which was owing to the want of resistance of the abdominal muscles. The fluid gave no reaction with litmus paper, its specific gravity was 1·020, and it formed a very firm coagulum on the addition of nitric acid, and also when heated. I ordered a carminative draught to be taken immediately, some wine and arrowroot, and a full opiate at night.

"October 24th. The patient slept well; complained of confusion in her head, and thirst, which was soon relieved by a cup of coffee; pulse 76, soft; tongue clean; no fluid passed from the opening. A nodulated tumour was distinctly felt in the umbilical and hypogastric regions; it was movable, and there was fluctuation on percussion; no abdominal pain. An effervescing draught was ordered to be taken every sixth hour.

"October 25th. Slept well; pulse 80; tongue clean; complained of pain and tenderness in the hypogastric region. Ordered a blister to the abdomen, and a mixture consisting of peppermint water, sulphate of magnesia, and aromatic confection: an ounce to be taken every fourth hour.

"October 31st. Continued free from pain, and left the hospital by her own desire.

"She was readmitted on the 29th of December, at which time her abdomen was very large; dull on percussion over its entire extent, but fluctuation was very distinct; the tumour could not be felt, owing to the tension of the abdominal parietes; the vaginal tumour was permanently protruded; it was about the size of an orange; its surface rugose, dry, and excoriated in spots, which caused much pain when the patient attempted to walk; pulse 106, small and feeble; tongue thickly coated with a yellowish fur; much thirst;

appetite very bad; frequent diarrhœa, and tenderness when pressed in the hypogastric region. She had been ill for twelve days before her readmission. The diarrhœa was soon checked; I pushed up the vaginal tumour, which did not again descend, and the patient said she was relieved from much pain and inconvenience, caused by the urine trickling over the excoriated spots. She complained frequently of sharp abdominal pains, which were relieved by turpentine stupes, and occasional blisters, together with full doses of solution of morphia, which were often repeated at her own desire. The abdomen increased in size, and the constitutional irritation, though somewhat alleviated, continued to such a degree, that it was considered advisable not to attempt more than palliative treatment; she gradually declined in strength, and on the night of the 20th of February she had a convulsion, after which she remained comatose, and died in about twelve hours.

"*Post-mortem.*—The examination was made the day after death; the body and limbs were much emaciated. On puncturing the abdomen several quarts of a transparent viscid fluid escaped; its colour was of a greenish-yellow. When the abdomen was opened the peritoneum was observed to be much thickened and opaque, and a deposit of greenish-coloured lymph lined the whole cavity of the peritoneum, and invested the tumour, which lay in the hypogastric region, and resembled an enlarged uterus. The intestines were glued down by the lymph to the posterior wall of the abdomen, which accounted for the absence of resonance, on percussing the abdomen, even in the epigastric region. On removing the lymph from the tumour its surface presented a mammilated or nodulated appearance; its size was about seven inches in length and six in breadth; it consisted of a large number of distinct cells separated by dense septa; most of the cells were filled with a transparent gelatinous substance, while a few were completely occupied with a thick pus-like matter. The tumour, which appears to have originated in the right ovary, has preserved its characteristic marks sufficiently well to enable the persons present to form their own opinions as to its origin. The uterus was rather small, and the left ovary was somewhat under the average size; it was opaque, white, and corrugated on its surface; the patient never menstruated. The lungs were adherent to the pleura costalis, but did not contain any tubercles; the other viscera were in a sound state."

DR. M'CLINTOCK read a paper suggestive of the formation of a code of "Medical Ethics," which might tend to advance the interests, while upholding the dignity, of the medical profession.

FOURTH MEETING, FEBRUARY 1ST, 1854.

PROFESSOR BANKS read a clinical report, and observations on a case of pneumothorax with effusion, in which the patient recovered[a].

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[a] Published at length in this Journal, No. 34, May, 1854, p. 318.

Dr. Neligan made some observations on the pulvis ferri of the last Dublin Pharmacopœia, chiefly with reference to the difficulty of obtaining it in a pure state, and the controversy which was being carried on between two rival wholesale chemists in London, in consequence of the substitution of the magnetic black oxide of iron for the true *pulvis ferri*, or, as it was generally termed, Quevenne's iron; adding that the simplest test and one which was sufficiently satisfactory for ordinary purposes, was the perfect tastelessness of the pure preparation. He also remarked that he had used it very extensively in practice and with the best results: the advantages which it possesses, being first, that it is readily acted on by the weak acids, the lactic and muriatic, which are ordinarily present in the gastric juice during digestion; and secondly, that it is free from the inky taste which the preparations of iron possess in a degree proportioned to their solubility,—the latter property rendering it peculiarly applicable for children. On the whole, Dr. Neligan considered the pulvis ferri superior in most cases to any other ferruginous preparation, and especially adapted for persons in whom the digestive organs are in a feeble or debilitated state, as is so frequently the case when indications exist for the administration of iron[a].

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[a] [Since the above observations were made, Mr. Morgan, the talented apothecary of Sir Patrick Dun's Hospital, has published the following formula for making this preparation; as it can be thus procured in a state of great purity at a cheap rate, the temptations to its sophistication, which depended on the difficulty, trouble and expense of the Pharmacopœial process, will be removed, and for the future this excellent preparation may be expected to be procured free from adulteration:—

"Eight ounces of yellow prussiate of potash are to be heated in an oven till the water of crystallization is driven off, reduced to a very fine powder, then thoroughly mixed with four ounces of red oxide of iron (previously well washed and finely pulverized), and three ounces of pure dried carbonate of potash. This mixture is then to be introduced (a small portion at a time) into a crucible previously heated to low redness. The heat must be kept up till all appearance of effervescence has ceased. The crucible is then allowed to cool, the mass scooped out, powdered, and, having been introduced into a large bottle, repeatedly washed by agitation and decantation with distilled water, till the washings cease to precipitate with nitrate of silver. The powder is then to be turned out on a filter and dried as rapidly and with as little exposure to air as possible. It may now, if necessary, be passed through a fine sieve to separate any particles which may have agglutinated, owing to the application of too high a heat. The powder should be preserved in a well-stopped bottle. With this process, and the quantities mentioned, the product obtained will weigh about three ounces and a half.

"As thus obtained the reduced iron is in fine powder, of a dark gray colour, not feeling gritty or course under the fingers; it dissolves completely in muriatic acid, with considerable effervescence, and the solution thus obtained yields with potash or ammonia the greenish gelatinous precipitate indicative of a protosalt. If the precipitate be reddish, it shows the powder to contain oxide of iron. Water digested on the powder should not precipitate with solution of nitrate of silver; that would indicate that all the cyanide of potassium had not been washed out."]

PROCEEDINGS OF THE DUBLIN OBSTETRICAL SOCIETY.

SESSION 1853-4.

(*Continued from* vol. xvii. p. 466.)

THIRD MEETING, 1ST OF APRIL, 1854.

DR. HENRY KENNEDY read an essay on the complication of scarlatina with acute rheumatism. He said that several years had elapsed since he ventured to bring before the profession an account of an epidemic of scarlatina, which prevailed much at the time, and lasted for at least seven years; that the disease, as he then saw it, seemed to be plainly divisible into two forms—the simple and the complicated; and that, included in the latter form, he had to notice the occasional occurrence of rheumatism as a complication; that his experience on this point, at that time, was limited, and hence but the briefest notice was taken of the subject. Since then, however, he has had occasionally to meet the complication much more frequently; and that, as it appeared to him now a subject of considerable importance, presenting varied aspects, he deemed a few remarks upon it would not be devoid of interest.

He then continued:—"I shall not confine myself exclusively to a notice of scarlatina complicated with acute rheumatism or rheumatic pains, but will examine such points connected with the other acute diseases as appear to me to afford a general view of the subject.

"Pains of a rheumatic character, in connexion with scarlatina, present themselves to our notice under three very different aspects, which it is necessary to bear in mind. In the first, they usher in the attack; in the second, they appear whilst the eruption is still out on the patient—the disease being at its height; and in the third they come on just after the attack is over, and form then what may be called a sequela of the disease. Of the first it will not be necessary to speak at any length; they are exceedingly common at this period, and are, in fact, exactly analogous to those pains which are so well known as ushering in nearly all the forms of acute disease. It is also worthy of remark, that precisely the same character will be noticed in connexion with them as may be observed in our ordinary fevers; that is, that at certain periods these pains are very much more prominent symptoms that at others; in fact, they may be so severe as to constitute the leading cause of complaint. In my own experience they are more common in adults affected with scarlatina than in children; and this we might presuppose, inasmuch as rheumatism is a more frequent disease in adult than in early life. The pains I now speak of are usually described as passing through all the limbs, though I have seen them often confined strictly to the joints—such as the knees and wrists,—and even in some cases a certain amount of swelling may be observed; this, though, is the exception to the general rule. These pains may be classed amongst the premonitory symptoms of the first stage of scarlatina; that is, when they are present; for numerous cases occur where they will be scarcely noticed. Pains of precisely the same character generally usher in an attack of rheumatic fever.

"In the majority of cases these pains subside after two or three days, and so leave the scarlatina to pursue its own course. In other instances they go a stage further; and then we have the joints swollen, the attendant redness, and every sign of well-marked rheumatic fever, excepting that there may not be such profuse sweating as commonly attends that disease when existing *per se*. I am now speaking of a period when the rash is fully developed, and at the same time the joints severely affected with acute rheumatism: a point which I believe to be of some importance, and which, in January, 1853, came under my notice in a very marked way, in a family of five brothers and sisters, in each of whom rheumatism of the joints was the leading feature of the attack. In two only, however, were the joints swollen precisely as in acute rheumatism, while the rash was still visible, and the throat of each very sore. To a brief notice of these two cases I shall beg to call attention.

"Case I.—A lady, aged 23, unmarried, was attacked with the usual premonitory signs of scarlatina four days previous to my seeing her in consultation. She suffered at first from severe headach, sore throat, and general pains through the body; these signs were shortly followed by a well-marked rash, without, however, any improvement in the pains, which, on the contrary, seemed rather to increase in intensity, and at the same time to localize themselves about the lower joints, which shortly became swollen. It was in this state that I first saw her. Her pulse was 116, full and bounding, but compressible; her tongue and throat morbidly red and dry, particularly the latter, which presented an angry, glazed appearance, attended with much swelling of the internal fauces; the rash was still visible in patches; the skin was morbidly hot, even though it gave a feeling of trivial moisture; the heart's action was regular, and there was no souffle; the distress was very great, and entirely referred to the swollen joints; the knees, ankles, wrists, being all engaged, and besides these the nape of the neck.

"Case II.—A sister of this patient, aged 17, lay in the same room. She had some symptoms identical with the first case, but with her the rash was still fully out; her joints were also affected with acute rheumatism, though not so many as in the former case; her pulse was 140, and very weak; and her throat was much engaged. It was, however, owing to most distressing and alarming fits of violent dyspnœa that I was asked to see this patient; and on the most minute examination I could not detect anything wrong with either the lungs or heart, though it was possible the latter might have been engaged, and more especially since the pulse was so rapid; there was no external swelling of the neck, such as I have often seen attend severe dyspnœa, nor such a state of the internal fauces as would account for it. I should have stated, that this girl's distress was referred to the larynx, and chiefly to the left side. Under these circumstances I came to the conclusion that the fits of dyspnœa must be nervous, and on the treatment I shall presently make a few remarks.

"These two cases were good examples of the combination of acute rheumatism with scarlatina; and it may be remarked, that the remaining three members of the same family had all severe pains in their joints, though no swelling was visible.

"The third and last way in which rheumatism may complicate scarlatina is by coming on as a sequela of the attack; that is, after the rash has declined, and the patient may have made some approach to convalescence. Of this occurrence I have now seen several well-marked examples. The following may be given as bearing on this point:—

"Case III.—A boy, eleven years old, was attacked with feverish symptoms, at first considered ordinary fever; the more so as he made little complaint of his throat. It turned out, however, to be scarlatina, though not presenting anything peculiar in its progress. He was convalescent from the attack, when he made some complaint of not being as well as usual. His tongue now again became furred, his skin hot, his pulse quickened, and he complained of pains through his limbs: next day all the larger joints presented well-marked examples of acute rheumatism, precisely as seen in the adult, except that the surface was not sweating so much as it usually does in ordinary acute rheumatism. This boy got well within a fortnight.

"Case IV.—A boy, aged four years, was convalescent from scarlatina about one week, when he was again attacked with very high fever, attended by swelling of the parotid region, which was soon followed by signs of effusion into all the larger joints. The first day I saw the case, the mother had sent for me on account of the swelling of the neck, which had caused a state of wry-neck, and as no other part was then affected, I set down the case to be one of those swellings of the neck which it was so common, at that time, to meet, in connexion with this exanthem. The next day I found the child was suffering severely from pains in the ankles and wrists, while the neck was still more painful than the day before. The child had been raving and screaming all night, the fever was at the highest pitch, and the skin was absolutely burning: the affected joints were red and swollen. The following day I found the ankles quite free from swelling and pain, while the knees had been attacked with both. It is enough for my present purpose to add, that this child got well in some days. The cases which have been given are sufficient to establish the fact that acute rheumatism may exist with scarlatina, or may occur as a sequela of that disease; it was, however, for another purpose than the mere announcement of this fact that they have been brought forward now. I wish to speak of them in reference to the question of diagnosis, for in this point of view there is really more difficulty than might at first sight appear. Acute rheumatism may be thought an affection, about the diagnosis of which there could be little or no doubt. Under the circumstances, however, that I am now speaking of the disease, it is a very different matter, and cases, I am aware, will occur where the greatest doubts will exist as to the nature of the attack. The disease with which acute rheumatism may be confounded is, of course, the well-known one where purulent effusion takes place in the joints or elsewhere,—an affection by no means uncommon in scarlatina, and about as fatal as can be met with. In the last case I gave, that of the boy of four years old, I had first set down the disease as one of purulent effusion; it had really every symptom of that formidable affection. The way in which the attack commenced, by the swelling of the parotid region, was little likely to lead to a correct diagnosis, and it was only the day following this, when four of the larger joints were attacked, that the question arose as to what was the nature of the disease; at this time there was a something about the case which struck me as strange. I observed, that though there was swelling of the neck, still it had not *increased* from the day before; now this fact, coupled with an intense degree of fever (supposing the case to be one of purulent effusion), had never before occurred in my experience, for twenty-four hours had always proved sufficient time to have caused a material increase in the swelling; here, however, it will be observed, there was none. But, again, as far as I had seen, no case had ever come under my notice amongst children, where pus was poured into four of the larger joints simultaneously, as appeared to have taken place here: it was usual to find but one joint affected at a time, and if more were attacked, it was in succession. For these reasons, then, I was kept in a state of suspense, which the following day cleared up, as already detailed. This case, which was also seen by my friend, Dr. Croker King, now of Galway, was to me one of great interest, being the first instance I had seen where a distinct rheumatic attack, and of a very severe nature, set in after scarlatina. Of its treatment, more hereafter.

"With regard to the diagnosis in these cases, the following instance, in which an incorrect one was at first given, may be detailed.

"Case V.—A boy, ten years old, passed through an attack of scarlatina, which presented nothing remarkable, except that it commenced with a sharp diarrhœa. He became convalescent to a certain stage, when fever again appeared to light up, ushered in by rigor, and attended by pain, which the boy referred to the left elbow. This was looked upon as rheumatic, of which disease (according to the accounts I received) it had most of the characters. The next day, however, the swelling had increased a good deal both above and below the joint; on the succeeding one it was still more increased, and finally it involved the entire arm, reaching from the hand even to the shoulder. With this state there were high fever and raving, and thus the boy sunk.

"This case was one of some importance, and very likely to have led, as it did, to a wrong diagnosis. I should say that the primary symptoms of the secondary attack were not so urgent as they usually are. The existence of the diarrhœa at the first onset of the disease is, in my experience, a sign to which we cannot pay too much attention. It rarely occurs without being attended or followed by some serious complication.

"On the subject of treatment one or two remarks will suffice. In the first case given, where acute rheumatism coexisted with scarlatina, after paying attention to the state of the bowels, she was ordered the decoction of bark in full doses, together with a good opiate, in the form of morphia, at night; subsequently the bark was given in the effervescing form, and this case made a very good recovery as regards the rheumatism, though a long period elapsed before she enjoyed her usual health.

"In the second case, where, with rheumatism and scarlatina, there were also fits of urgent dyspnœa, an emetic was administered with very marked advantage; subsequently she got lemon-juice with good effect, and her recovery was a very quick one.

"Of the treatment of rheumatism complicated with scarlatina, I have had comparatively little experience. But I believe some plan, like that just given, and of course suited to the demands of each particular case, holds out the best prospect of a rapid recovery. Bark in full doses is certainly useful, nor does a furred tongue, and other signs of fever, deter me from its use. On the other hand, there are cases where it does not agree, and these I am unable to describe particularly. I recollect well, in a conversation with the late Mr. Colles, his stating the very same thing in reference to the ordinary acute rheumatism, viz., 'that in many cases of the disease, bark was the proper remedy, whilst in others again it disagreed.'"

Dr. Neville brought before the Society the following cases:—

Case I.—Mrs. S. was taken ill in her fifth labour at half-past 12, A.M. The membranes were ruptured very early, and a great quantity of liquor amnii was discharged. The husband of the lady at once set out for Dr. Neville, and in the interval of time between his departure and the doctor's arrival, brisk pains arose, and some trivial hemorrhage took place. On Dr. Neville's arrival he made an examination, but was completely puzzled to ascertain the presentation; however, as well as he could form an opinion, it seemed to be a "breech." This examination was instituted at 2 o'clock, A.M., and the pains had then become weak and infrequent; the patient was extremely anxious, and in this state matters remained till 5 A.M.; the pains now became more frequent and powerful, and Dr. Neville was in hopes labour would terminate quickly; after an hour, however, uterine action again ceased, and a rather smart hemorrhage set in. The os uteri was now dilated to the size of a crown-piece, and the nose of the fœtus was distinctly felt by Dr. Neville, who, therefore, concluded the presentation to be "a face;" half a drachm of ergot was administered at this period, and the dose repeated in about twenty minutes, but without producing much effect upon either the hemorrhage or the pains. At 8 o'clock, A.M. the first stage had concluded; there seemed to be room, and the presentation was just on the perineum, but the pains were still feeble; there was yet some hemorrhage, the pulse was beginning to fail, and the patient was extremely anxious; Dr. Neville now determined to use the forceps, and lost no time in attempting the delivery, "which he accomplished with the greatest difficulty, the instrument slipping continually." It proved on delivery, that the fœtus was acephalous, and Dr. Neville gave the following description of it:—"There were no parietal, frontal, or occipital bones; the vertex was quite flat; there were no eyes, but the other features appeared perfect. The chin and neck formed a continuous surface, which was very short and thick, as were the shoulders, chest, and body. The deformed head, together with the surface for the distance of half the spine, was of a dark colour; the extremities were duly proportioned and naturally formed."

Dr. Neville concluded this case by saying "that, two months prior to this patient's confinement she experienced a great fright from the shock of the earthquake then felt in this city; and that on the following morning she was very unwell and much excited, so much so, that the doctor's assistance was required; she got over the immediate effects of the fright, but from this period she increased to an enormous size, which led her to suppose she was pregnant of twins, and rendered her very helpless during the last month of gestation. All her children, save one, were born healthy; which one (the fourth) was still-born from her own imprudence—over-exertion."

Case II.—Mrs. G. was delivered, after a natural labour of one hour's duration, of a large boy, her ninth child; it presented the following peculiarities:—"From the centre of the dorsal region down to the coccyx there could be felt no spinal ridge, but occupying the situation of the ridge a large tumour was found, covered by very thin integument, and filled with a coagulum about the size of a large orange." The day after its birth the child was examined, and upon inquiry it was found that no urine had passed; it was now seen that the coverings of the tumour were sloughing, and these gave way in the evening, when a large clot was discharged; no urine had as yet passed naturally, but the meconium had come away after some appropriate medicine had been administered. On the next morning, the first inquiry was concerning the urinary secretion, and on stripping the child for this purpose the doctor found the dressings wet, and conveying a distinct odour of urine; and it was discovered that from the time that the coverings of the tumour gave way the dressings and the clothes in its region were moistened with a distinct urinous secretion every three or four hours. The child lived to the eighth day, but no post-mortem could be obtained."

Dr. Atthill exhibited an instrument which he had devised for the local application of chloroform. It was composed of glass, and might be said to consist of two portions: first, a small hollow bulb about one inch and a quarter in diameter, connected to, second, a shallow concave disc, with which it communicated by a somewhat constricted opening. In the bulb was placed a small piece of sponge, upon which it was intended to pour the chloroform; and the arising vapour was to be confined to the affected part by the concave disc held over the same, its edge being in contact with the skin. Dr. Atthill's directions for using this instrument are as follows:—The bulb is first to be dipped in hot water, then a drachm of chloroform is to be poured upon the sponge, and the disc at once placed over the part, the palm of the hand being closely applied to the bulb during the entire time of application, in order that the heat may to a certain extent be maintained, and thus the vapourization of the drug facilitated.

Dr. Atthill considers this instrument to have the advantages of being economical, simple, and portable, and at the same time to possess the capability of keeping a uniform persistent contact of vapour with the part; he does not deem, however, that it will induce complete anæsthesia of the surface to which it is applied, but he has found it useful in allaying pain, both deep-seated and superficial, and especially applicable to cases of fissured and excoriated nipple.

SIXTH MEETING, TUESDAY EVENING, MAY 2ND, 1854.

DR. HARDY read a paper upon erysipelas occurring in early infancy. He considered erysipelas to be the precursor of puerperal fever, and alluded to Dr. M'Clintock's able Report of the epidemic of the latter, which visited the Lying-in Hospital in the year 1845[a], where he (Dr. M'Clintock) makes the following statements in the summing up of the facts connected with that epidemic:—"The remarkable circumstance, that of the fourteen children of the women attacked, five died, one of rapid trismus, one of erysipelas, and three of convulsions."

During the same period that puerperal fever was in our wards, erysipelas was very prevalent in some of the surgical hospitals throughout the city. A like coincidence has been observed on former occasions. In connexion with this Dr. M'Clintock goes on to say, "I may be allowed to advert to two papers in the Provincial Medical Journal, one by Mr. Storrs of Doncaster, the other by Mr. Elkington of Birmingham, both of which go to establish the fact that puerperal fever may be induced by fomites or infection conveyed from erysipelas."

Dr. Hardy said, many were doubtless aware that puerperal fever had made its appearance recently in Dublin both in private and hospital practice; he had not, however, heard whether erysipelas had prevailed in connexion with it, to any extent; but having himself met with infantile erysipelas in the month of April last, attended with unusual symptoms, he thought the details of the case would prove of interest.

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[a] Dublin Medical Journal, vol. xxvii., First Series.

M. L., a female, fifth child of its mother, was born on the 20th of February of the present year, at the patient's home, seemingly healthy. On the 6th of March, being a fortnight after the infant's birth, she was attacked with erysipelas. The disease first made its appearance on the left lower extremity, came on suddenly, and in a few hours extended over the limb from the foot to the knee; some days after, the other leg was seized upon by the inflammation; then it appeared on the face, and afterwards it again engaged the right lower extremity. On the 18th of March (twelve days from the commencement of the attack) this child was brought to the Institution for the Diseases of Children. The blush of erysipelas was then on its face and arms to a partial degree, and there were symptoms of a good deal of debility consequent upon the duration of so severe a malady with so young a child. The mother, a strong, healthy woman, asserted that her confinement and recovery had been very favourable, and she was suckling her infant.

The treatment adopted was directed towards supporting the strength, principally by various kinds of nourishing drinks; in the first place because the child was too weak to take a sufficiency of food from the breast; and secondly, because, owing to the anxiety evinced by the mother for her infant, her milk was not a suitable nutriment for the invalid. The drinks directed were wine whey, chicken's-neck broth, with isinglass, &c., and the medicines administered were alteratives, with stimulants and tonics, such as iron, quinine, syrup of bark, and iodide of iron; but, besides attention to diet and medicine, the child was removed from its residence to the country, for change of air.

After the disease had passed from place to place over different regions of the body, it at length seemed to seize permanently the right extremity, which became very much swollen, particularly at the knee, and over the dorsum of the foot. Fluctuation subsequently become evident over the outer condyle, and a very large quantity of thin purulent matter was given exit to. In about a week after the first, a second collection formed over the inner condyle, and was in like manner evacuated by incision. The limb from this time improved very much, as did also the general health, until the 23rd of April, when, according to her mother's account, the child was seized with a convulsion, and this was repeated several times on the day following. On the 25th the infant was again brought for examination, and it was found that the diseased limb was of a natural size, the only swelling remaining being on the dorsum of the foot, and that was very trivial; a bandage was directed to be applied and worn at this date, since which the infant, as far as could be learned, has improved.

Dr. Hardy drew the attention of the Society to the following circumstances connected with this case:—First, to the age at which the child was seized with erysipelas, being so early as a fortnight after birth, yet that the children affected with this disease during the epidemic of puerperal fever in 1845, alluded to above, were much under this age. Next, to the fact of the infant being suddenly attacked by the disease, without any precursory symptoms of a nature sufficiently marked to attract the attention of the mother; and here he again quoted from Dr. M'Clintock's Report, by way of comparison, as follows:—"During the months of January and February the wards were remarkably healthy, insomuch that no death occurred out of the 367 women who were delivered within that space. I cannot say that we remarked the convalescence of the patients to be unusually slow or tardy previous to the outbreak of the fever; at least when such was the case it arose from their bad health at the time of delivery, and not from any puerperal complaint. From these two circumstances it will, no doubt, be anticipated, when I say that the invasion of this formidable malady was most unexpected and unlooked for, when it appeared amongst the patients in our hospital."

Dr. Hardy next took notice of the duration of the disease in this child's case, and remarked that one could hardly expect such a feeble infant to bear up for so long a term; but that the nourishment, tonics, change of air, &c., had recourse to, contributed much to enable it to do so; and that the necessity of substituting some nourishment instead of its mother's milk was obvious.

Lastly, attention was drawn to the convulsions coming on at the termination of the case, and in allusion to these, Dr. Hardy said that, had they continued or recurred, he had determined to have resorted to the use of chloroform in the form of enema, or, as Dr. Ringland[a] lately administered it, in the form of vapour injected up the rectum. Dr. Hardy had seen great benefit arising from the use of enemas of chloroform, to the amount of thirty drops of the drug in some mucilage, in a case of hydrocephalus, when convulsions set in at the close of the disease.

The bandage used in this case Dr. Hardy thought most useful, as it maintained a due support to the parts after the discharge of the matter, and tended to keep up the temperature of the limb.

Dr. Thomas Hayden brought forward the following case of "death of the fœtus in utero, and subsequent uterine phlebitis:—

"A. R., aged 38, residing in the city, consulted me, on the 13th February last, under the following circumstances:—She was in the eighth month of her third pregnancy, and had no reason, up to a week previous to my seeing her, for feeling uneasy concerning the result. About this time, however, the movements of the fœtus, which had been hitherto very troublesome, ceased to be perceived, and she apprehended that the child was dead. The object of her visit to me was to have her doubts upon this point removed or confirmed. Upon examination, I distinctly perceived, with the hand laid flat on the abdomen, a body rolling heavily as in liquid: I made the most careful stethoscope investigation, for the purpose of detecting the sounds of the fœtal heart, but failed to satisfy myself of its presence. Not feeling sufficient confidence in the result of a single examination to pronounce positively the death of the fœtus,—especially as the uterus was greatly distended with *liquor amnii,*—I directed the patient to observe closely whether any movements took place in the uterus, and to return to me that day week, having taken an aperient draught the morning of her visit.

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[a] See Dublin Medical Press, April 19, 1854.

"She came on the day appointed, having acted in all particulars as I had directed, but stated that no fœtal movements whatever had been perceived since her former visit. I repeated the stethoscopic examination still more carefully than before, but with a similar result: no fœtal pulsations being discoverable, nor were any of the usual presumptive evidences of the death of the fœtus present, save the sense of unusual weight in the abdomen. I ventured, however, to pronounce fœtal life extinct, and warned the patient to let me have early notice when labour set in. Labour commenced on February 24, at 9 P.M., and in five hours the patient, without undergoing any unusual suffering, was delivered of *twin boys,* both in an advanced state of decomposition: the placentæ were thrown off almost instantaneously.

" All went on well till the fifth day after delivery, when, about 9 P.M., the patient was seized with shivering, complained of abdominal tenderness, and at the same time there was a fetid discharge from the vagina. Early in the morning of the next day a copious uterine hemorrhage set in, judging from the appearance of the saturated sheets. The abdominal tenderness now increased, and was localized to the hypogastrium, where the uterus was felt firm; there was a foul discharge from the vagina; the pulse was 100, and full; the tongue was slightly furred; the skin hot and dry; the urine high-coloured; and the bowels constipated. A turpentine enema was ordered; the vagina was directed to be well syringed with tepid water, and the abdomen to be stuped with damp warm cloths, some spirits of turpentine having been previously sprinkled over them. Two grains of calomel, and a quarter of a grain of opium, were administered every second hour; and a mixture, composed of aromatic spirits of ammonia and camphor julep, was occasionally given.

"On March 3rd, abdominal pain was slightly relieved; the urine was still high-coloured; the vaginal discharge still fetid; pulse 110; and face somewhat flushed. She had slept a few hours during the night, but her rest had been interrupted. The calomel and opium were continued; also the stupes, vaginal douche, and mixture.

" March 4th. It was stated that she talked incoherently through her night; she had slept little; this day she complained of giddiness; the pulse was 120, and not so full; she had five evacuations from the bowels during the night, which were slightly tinged with blood, and accompanied with dysenteric pains; tympanitis was present, but uterine tenderness lessened. She was now ordered hydrargyrum cum creta and pulvis antimonialis, of each two grains every second hour; a tablespoonful of mulled port wine occasionally, and the mixture was continued.

"March 5th. She was exceedingly restless, and raved during the night; at 3 A.M. the power of utterance failed, and she sank into a state of stupor. On visiting her at noon, I found her lying listless; her face flushed and pupils dilated; her body bathed in perspiration; the pulse 150, but rather strong, and quite regular, and though incapable of speaking she appeared to me, once or twice, to exhibit an imperfect intelligence on being pointedly addressed. The bowels were moved only once, but no urine was passed since last night, I introduced the catheter and drew off about 20 ounces of a high colour. As there was still an offensive oozing from the vagina, I thought it possible that some portion of the placenta or membranes might have remained, but on examination this proved not to be the case. There was an incessant fidgeting of the fingers, and occasionally a perceptible twitching of the muscles of the face and rolling of the eyes. I ordered the mulled wine to be repeated every half-hour in small doses, as she still retained the power of deglutition, and a mustard cataplasm to be placed over the front of the chest, where there was physical evidence of bronchial congestion. At 3 P.M. there was no marked change, the mustard plaster had been left on two hours, and had produced the desired effect; the face was now pale; the lips and fingers were livid; pulse 158, but regular, pupils dilated; there were sordes about the mouth, but the power of swallowing still remained. At 8 P.M. I found her totally unconscious; her pulse regular, quite distinct, and beating 158 in the minute, and her face slightly flushed; she still retained the power of deglutition. At this visit I drew off about eight ounces of urine, and whilst so engaged the fæces passed involuntarily. Slight dulness and bronchial respiration having been detected under the left clavicle, a mustard poultice was directed to be applied over that region.

"March 6th. She died slightly convulsed at 5 A.M.; I sought to be allowed a post-mortem examination, but permission could not be obtained.

"I tested the last specimen of urine taken from the patient, and found it highly acid, and of specific gravity 1020; it presented nothing remarkable under the microscope.

"I propose to offer some observations on this case, under the following heads:—First, the length of time the fœtuses were retained 'in utero' after negative evidence of their death was furnished, and the means of ascertaining their death; secondly, the period after delivery, when symptoms of phlebitis first appeared; and thirdly, the treatment of that disease under the peculiar circumstances of the case.

"As to the length of time the fœtuses were retained after evidence of their death was furnished; if we can rely upon the statement of the mother, and I see no reason to doubt it, they must have been so retained for a period of seventeen days, and with so little effect upon the general health, that, could she have removed from her mind the impression that she carried a dead child in her womb, she might have been pronounced in tolerably good health for a person at so advanced a stage of pregnancy. This is a circumstance which *a priori* reasoning would not lead us to expect; first, because a fœtus in this condition is, to all intents, a foreign body, and in the next place one of the worst description of such, being liable to undergo decomposition; but here, as in many other instances in medicine, experience asserts her prerogative, and shows the danger of trusting to theory rather than observation. We are all familiar with recorded cases of extra-uterine pregnancy, in which the fœtal body has been retained long enough to undergo the successive processes of decomposition and absorption, without producing a proportionate derangement of the mother's health. It is, however, a matter of some importance to ascertain the cessation of vitality in such cases as the one I have narrated, if for no other reason than to establish accuracy of diagnosis, and thus give moral weight to scientific medicine. But a stronger incentive to prosecute the inquiry will occur to very humane mind, viz., the possibility of anticipating, by the induction of premature labour, the evil consequences *likely* to result to the mother, from the long continuance of a putrid mass within her body; and now that such facilities and perfectly safe means for effecting that object are in the hands of the profession—a boon for which we are indebted to the celebrated Kiwisch,—it occurs to me that we only want accuracy of diagnosis to render the rule of practice simple and intelligible.

"Dr. Evory Kennedy appears to me to underrate the value of the evidence, as to the life or death of the fœtus, derived from the sensations of the mother; he justifies his diffidence in this symptom by mentioning a case in which the mother continued to feel the motions of the child, and persisted in the belief that it still lived, although a stethoscopic examination satisfied him that it was dead; but such a case is not as strong as its converse, viz., where the patient feels the fœtal motions up to a certain time, and then *ceases* to feel them, since it is much easier to conceive a *plus* than a *minus* sensibility in mucous surfaces. We are all aware of the length of time that deceptive impressions are retained by these surfaces, as that of a foreign body in the eye or œsophagus, long after its removal; on the contrary, how rarely, if ever, does it happen, that such sources of irritation are believed to be removed while still present! I have now met with three cases, including this, in which the cessation of fœtal motion, as experienced by the patient, induced in her mind the suspicion of its death, and in all three the result but too fully justified this suspicion. I think, therefore, that we should not affect to disregard the impressions of the mother as to the death of the fœtus 'in utero'; and, where the evidence derived from a stethoscopic exploration, carefully conducted and repeated by a practised ear, tends in the same direction, that we might (relying on these two symptoms alone, irrespective of all others) venture to pronounce fœtal life extinct, and act accordingly; at least in the advanced stages of pregnancy.

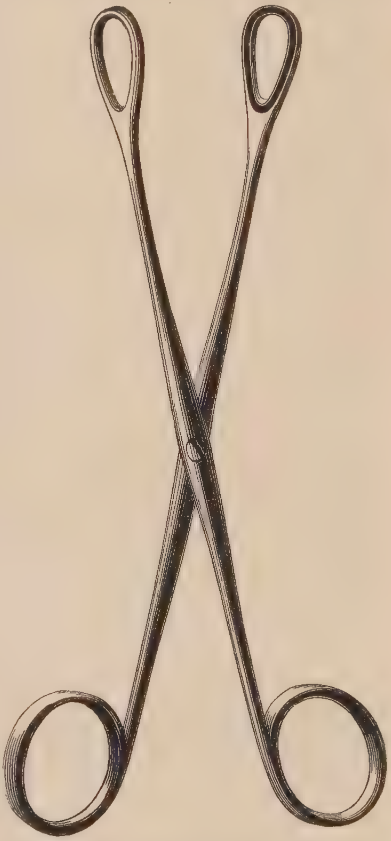
"With reference to the period after delivery, when phlebitic symptoms first manifested themselves, it may be asked, 'how can the long interval of five days, between the *accouchement* and the appearance of those symptoms, be accounted for?' I rather think it may be explained on the same principle as inflammation of the cyst in psoas abscess, viz., by atmospheric influence; air was hitherto excluded from the uterine cavity, but after delivery it had free access, and, producing its usual effects on morbid surfaces (for in that light we must regard the walls of the uterus, that have been so long in contact with a putrid fœtus), it excited unhealthy inflammation, and probably slow decomposition of some retained shreds of the membranes or placenta.

"The hemorrhage that set in a few hours after the occurrence of the *rigor*, which gave evidence of the first entrance of morbific matters into the circulation, is remarkable, and probably proceeded from some of the uterine sinuses that had been hitherto plugged by an attached portion of the placenta, but this, becoming broken down by decomposition, was no longer competent to close the mouths of the vessels, and bleeding was the consequence.

"It has been shown by Magendie, that poison was not taken up by the veins while distended with water, but that when these vessels were partially unloaded, they absorbed rapidly. May not this well-established fact in physiology afford some clue to the coincidence of hemorrhage, and symptoms of blood-poisoning in the present case?

"The last question to be considered has reference to the treatment. Should it have been initiated by blood-letting? In answer to this question, I will only observe I was determined in not resorting to depletion by a consideration of what I believed to be the cause of the symptoms manifested—contamination of the blood by the admixture of morbid products. Ferguson states that one-fifth of his cases of peritoneal puerperal fever were treated without bleeding or mercury, and out of these only two died. On the treatment of his 'complicated' form of that disease (under which head the present case would come), he calls mercury the 'nobilissimum remedium.' It will be recollected that in my case the patient took 48 grains of calomel, and 12 grains of mercury with chalk, without its producing any constitutional effect. The substitution of hydrargyrum cum creta with antimonial powder, for the calomel and opium, checked the mercurial dysentery; the administration of opium for that purpose would have been scarcely justifiable when incipient head symptoms were present. The vaginal douche I have found particularly useful in these cases, not only for the comfort of the patient and those around her, caused by the removal of offensive odours, but also for the positive advantage in combating inflammatory symptoms, derived from cleansing the vagina of putrid discharge. Might it not be safe and advantageous in similar cases to direct a current of tepid water into the uterus itself, by means of Dr. Sinclair's douche?

"The unfavourable issue of this case can be scarcely deemed a fair criterion of the plan of treatment pursued, when we recollect the great proportionate mortality caused by puerperal fever. Dr. William Hunter (as quoted by Armstrong, from a manuscript lecture) says of these cases, 'Treat them as you will, at least three out of four will die,' and Ferguson considered saving two out of three very successful practice."



Dr. M'Clintock exhibited a forceps of his own designing, which in certain cases of abortion had been found very useful for removing the embryo, placenta, or membranes. The accompanying sketch will, perhaps, convey a better idea of its shape and construction than any verbal description. Its extreme length was nine inches and a half, and the length of the blades five inches. The lock or hinge was of the simplest kind, and this, together with the general smoothness and roundness of the blades, almost precluded the possibility of the vaginal mucous membrane being in any way nipped or pinched. Owing to the length of the blades, the lock is generally external to the vulva when the instrument is being used. The principal advantage of this forceps is its having a fenestrated or open grip, by which can be obtained a very secure hold of any soft yielding substance, such as an ovum, without being likely to lacerate or tear it, and without sensibly adding to its bulk. An instrument resembling this was long ago suggested by M. Levret, but does not seem to have come into use, or even to be known in this country. Dr. M'Clintock wished it to be particularly understood that this forceps was not intended to be introduced *within* the cavity of the uterus, for the extraction of an ovum; such a procedure being, in his opinion, open to most serious objections, and seldom if ever justifiable. But when the ovum, or a part of it, was detained by the os uteri and partially protruded from this orifice, an instrument of the kind above described might be of essential service in effecting its safe and speedy removal.

Some cases were related by Dr. M'Clintock illustrating the mode of application and utility of this "abortion forceps."

The two following cases were forwarded to the Society by Dr. Lever, of Guy's Hospital, London:—

"CASE I.—*Laceration of the Perineum, with Prolapsus of the Uterus and Vagina.*—J. W., aged 33, was admitted into Guy's Hospital under Dr. Lever, March 28, 1854. Her general health has been good; she was married at the age of 24, and ten months after marriage was delivered of her first child, the labour being of 24 hours' duration. After her delivery, she was unable to retain her motions, and at the expiration of four days she drew the attention of her surgeon to the circumstance, but nothing but cleanliness was enjoined; she continued suffering both mentally and bodily under the slightest excitement for a period of six weeks. She has since borne five children, and at each succeeding labour she has become less able to retain the fæces. When admitted she was quite unable to retain the contents of the rectum, and was in the habit of having recourse to the water-closet six or eight times daily. On examination the perineum was found to be lacerated, the fissure extending to the sphincter, the edges were red, the uterus was prolapsed, and the vagina relaxed and baggy. She suffered from considerable pain in the loins; her general health was good, although her appearance and pulse betokened great debility. She was ordered an ounce of quinine mixture three times daily.

"On April 9th, Mr. Poland, the assistant surgeon, divided the coccygeal attachment of the sphincter ani, as well as the posterior attachment of the levator ani; passing the forefinger of his left hand into the rectum, with his right, he, by means of a curved tenotomy knife, made a subcutaneous incision of the attachments. Care was taken to guard against hemorrhage, the bowels were kept quiet, and on the 18th the patient, at her request, was presented.

"The patient has been seen several times since she left the hospital; the perineal fissure has closed; and she is able to retain her motions.

"This case is one of a type similar to those published by me in Guy's Hospital Reports, vol. viii., Part 2, 1853; and which were operated upon by my colleague, Mr. Hilton; the reasons which guided the operator, and which influenced myself, are there detailed, viz., that by detaching the coccygeal attachments of the levatores ani those muscles would contract towards their more fixed point. The anticipated result was gained, the contractile power of the sphincter ani from the loss of its coccygeal attachment was 'directed towards the vagina and thence to the pubis,' the perineal laceration was closed, and the patient has recovered comfort, health, and freedom from suffering.

"CASE II.—*Recto-Vaginal Fistula.*—S. P., aged 37, was admitted into Guy's Hospital on September 20, 1853. Fourteen months previous to her admission she had a very tedious and lingering labour, and from that period has been much inconvenienced by the discharge of fæces and the passage of flatus 'per vaginam.' She at first applied as an out-patient, and was treated for leucorrhœa, of which she solely complained, by the use of Tormentil injections and the administration of quinine mixtures; the inconvenience from which she suffered was afterwards detected, and attention was then directed to the fistula. On examination it was found that a fistulous opening existed, and was to be felt by the finger about one inch beyond the fourchette, but not readily, as it was hidden by a fold of mucous membrane; but on the introduction of another finger into the rectum, and with care, after some little time the tips of the two fingers could be made to touch. On October 10, after consultation, Mr. Poland proceeded to operate in the following manner: Introducing a probe through the opening to the vagina, it was found to take an upward direction in the recto-vaginal septum before communicating with the gut; the end of the probe was then brought out at the anus, and served as a guide for the bistoury, which was introduced by its side into the rectum from the vagina, and the point being there met by the forefinger of the left hand, the operation was completed in the manner of that for fistula in ano; the whole of the tissues between the rectum and vagina being divided in the median line of the perineum. But slight hemorrhage followed; the edges of the wound were kept asunder by oiled lint, and the patient was placed in bed.

"From the time of operation till the 27th, the bowels, habitually costive, did not act; and she was ordered an oil and rhubarb mixture, which operated effectually. After this the wound commenced to granulate, the lint was gradually withdrawn, that is, less applied at each dressing, and the wound therefore allowed to heal from the bottom. Subsequently it was necessary to use the black wash, and she left the hospital on November 22.

"She has been seen several times since this period; the wound remains perfectly healed, and no inconvenience is felt.

"This patient, a misery to herself, and an object of disgust to those about her, was received into the hospital suffering from great depression of spirits, when, on investigating her case and consultation with my colleague Mr. Poland, we determined upon the operation previously detailed.

"The operation was quickly performed, and the pain comparatively slight. I have lately seen her (June 18), and she cannot sufficiently express her gratitude for the benefit she has derived."

A Case of Apoplexy of the Liver; Albuminuria; in a man affected with Moral Insanity and Epilepsy. By Richard F. Foote, M.D., Physician to the Norfolk County Hospital for the Insane.

Although the above case was described at the annual meeting of the Medical Officers of Hospitals for the Insane on June 22nd, and a short account of it was published in the Asylum Journal, I think it may be worthy the attention of the profession to give more at length the details of an example of so rare a specimen of pathology.

I have been unable to find any description of this morbid condition except in Rokitansky's Pathological Anatomy. This author states that "Apoplexy of the liver is a very rare occurrence; it results from congestion which has rapidly attained a very high degree, and undoubtedly commences as capillary hemorrhage; an apoplectic clot is thus caused, which may enlarge and induce a rupture of larger vessels. According to the seat of the hemorrhage we find two varieties: viz. peripheral and deep-seated; both may, however, occur simultaneously. In the former, the hepatic peritoneum, especially that investing the convex surface of the right lobe, is detached in a varying extent, and underneath it is found fluid or coagulated blood to a larger or smaller amount. These hemorrhages occur chiefly in infants as a consequence of impeded respiration and pulmonary circulation from suffocative catarrh. The hepatic peritoneum may become ruptured, and thus cause an effusion of blood into the abdominal cavity. The liver is in a state of permanent congestive tumefaction, and, being overcharged with blood, presents a dark-red colour and looseness of texture. We are reminded by these effusions of analogous bleedings in the cranium, accompanied by a detachment of either the pericranium or the dura mater, which constitute the so-called thrombus or cephalhæmatoma.

"In the second variety apoplectic spots of various forms and sizes are found in the parenchyma; there are generally several of them dispersed through the organ. This variety is found more frequently in adults than the former, but the two may take place at the same time."

The case which I am about to describe exhibited a combination of the two forms. R. H., male, aged 58, married, was admitted into the Norfolk County Asylum, 11th August, 1840, suffering from moral insanity, with homicidal propensities, and epilepsy. He was a tall man, 5 feet 10 inches in height, stout, with muscular conformation, and of sanguine temperament. From the history which I obtained from his wife after his death it appears that, when a young man between the ages of twenty and thirty, he had been employed on board ship in the merchant service, was exposed to many hardships, and was very intemperate in his habits.

The first attack of epilepsy came on twenty years since, at 1 o'clock in the morning, the first night of sleeping with his wife after her parturition; this lasted about five minutes. He was not again attacked for a fortnight, and after this time the fits occurred regularly at weekly or fortnightly intervals, sometimes during the night at other times by day. Having for some time given up the occupation of a seaman, he was employed as a bricklayer, and had become sober, steady, and industrious, since marriage. He had always been a most passionate man, and at times his temper appeared to get the complete mastery of him; he was in the habit of saying, "that he dare say he should kill some person one day." The epileptic seizures appeared to increase his irritability, but his intellect was in no way affected apparently at any time. There appears to be no hereditary tendency to insanity, but his mother has a most violent temper. The supposed cause of the epileptic attacks was said by his wife to arise "from disappointment as to property;" but it is more probable that they arose from his intemperate habits and ill-regulated mind, combined with sexual excesses. For eight years, his wife stated, "she bore with him, until, her life being in danger, she was anxious that he should be moved to an asylum." Having attempted an assault on the clergyman of the parish, he was sent to gaol; and after some time, through the representation and intercession of his wife, it was thought desirable to remove him to an asylum.

The first entry respecting his case which I made was in March, 1853, in which it is stated that he suffers from occasional attacks of epilepsy, with homicidal propensities; he is sedentary in his habits, sullen and morose in disposition; employs himself a little in tailoring and reading, and his physical health is good; the memory is somewhat affected.

I have been enabled to learn his history since residing in the asylum, which seemed to establish the idea that he suffered from moral insanity, with most decided homicidal propensities and epilepsy. Very little change was noticed until April, 1854, when he suffered from apparent general debility, with small ulcers of the legs, and slight œdema, for which he remained in bed. He became gradually worse, and on April 21st it was noticed that there was some swelling of the face, an apparent swelling of the abdomen, and shortness of breath. The urine, on examination, was found to be highly albuminous and acid, with a specific gravity of 1012. The diet, which had consisted of meat daily, with beer, &c., was changed for beef-tea, and milk, and an occasional mercurial, with saline aperients. At the end of two weeks he had improved, the abdomen became less, and the respiration was natural, but the epileptic attacks still occurred as usual, about two or three every fourteen days.

He was unable to get up, and therefore remained in bed; and on 24th May, at 9 P. M., was seized with a severe epileptic fit, which lasted half an hour; an interval of about a quarter of an hour took place between it and another attack. He suffered from repeated fits during thirty hours, until he died.

Necroscopical Examination, twelve hours after death.—Thermometer, 65° Fahr.; atmosphere, dry; weight of body, 190lbs. *External Appearances.*—Ears and countenance livid; abdomen and chest large; head well developed; over the crico-thyroid membrane an old transverse cicatrix, as if the remains of a cut throat[a]. The body generally covered with fat; indeed, he was very corpulent, and from two to three inches of fat covered the abdomen; rigor mortis present; two small ulcers on the legs. It may be remarked, in reference to the great quantity of fat found on the body, that his appetite was voracious, and he perhaps might, as I believe he did on some occasions, take food left by other patients; added to this, his habits were very sedentary.

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[a] I have ascertained that, on one occasion, in a paroxysm of passion, because he could not do as he wished, he took up a piece of glass and made a wound in his throat.

Head.—Scalp extremely thick and hard; much fat just beneath the skin; dura mater very firmly attached to the calvarium, the latter thick and symmetrical; arachnoid milky in places; pia mater somewhat congested; gray substance of brain pale white, of healthy appearance; choroid plexuses contained a few cysts, looked bloodless, as if stained with discoloured blood; the lateral ventricles contained together about ten drachms of serum; in the basilar and vertebral arteries the commencement of a deposit of atheroma; pons varolii pale; cerebellum healthy. Weight of cerebrum, 43 ounces; of cerebellum, pons varolii, and medulla oblongata, 7 ounces. Specific gravity of cerebrum and cerebellum, 1·040.

Thorax.—A few old adhesions on the left side, above and behind; lungs very much congested; upper lobes frothed when cut; lower lobes in a state of hypostatic congestion.

Heart.—Right auricle and ventricle full of fluid black blood, the ventricle much dilated; left ventricle much dilated and hypertrophied; walls of ventricle two inches thick. After all the blood was washed out, and the pericardium removed, the heart weighed 21 ounces.

Abdomen.—Stomach empty; mesentery and all the viscera loaded with fat.

The liver was firmly adherent on the upper surface of the right lobe; left lobe free. When removed, this organ weighed 71 ounces. On the anterior two-thirds of the right lobe, beneath the peritoneal covering, was a firmly coagulated clot (apparently of recent origin), of a heart-shaped form, and seven inches by six in superficial diameter. The appearance which it exhibited gave the idea of a smaller liver placed upon the surface of the right lobe. The left lobe was small.

On slicing the liver it was found that the clot was about one inch in thickness anteriorly, becoming thinner as it proceeded backwards. The substance of the liver was paler than usual, having a fatty appearance. In the centre of the right lobe were three smaller clots, about one inch each in diameter, and connected with that on the periphery; around each of these small clots was a thin layer of a yellowish, soft substance, looking like tubercle, which, on microscopic examination, proved to be fat.

The spleen was everywhere adherent to the diaphragm; weight, four ounces.

The kidneys, when cut, exhibited a yellowish, fatty appearance of the cortical substance, which was very thin, and extended to the inter-pyramidal substance. The right kidney weighed five and a quarter ounces, and had on its surface some small, serous cysts; the left weighed five ounces.

In conclusion, it may be well to notice that, from the observations which have been hitherto made, albuminuria is of rare occurrence among the insane. Dr. Sutherland, of St. Luke's Hospital, in 1845, found that of 192 individuals labouring under the different forms of insanity, in whom the urine was examined, it was albuminous in only *seven* cases.

On the Prognosis and Treatment of Diabetes. By PROFESSOR SCHUTZENBERGER.

THE conclusions drawn by the author are as follows:—

1. Glucosuria is not an incurable disease; if the disposition to relapse cannot be disputed, it is, however, possible, with perseverance, not only to banish the sugar from the urine, but gradually to bring the patient to bear a mixed regimen into which farinaceous matters enter in considerable proportion without causing relapses.

2. The quantity of glucose passed by the patients is sensibly proportional to the quantity of farinaceous matters taken as food, and it is possible to infer departures from the prescribed diet from the increased amount of the glucose in the urine. The quantity of urine is perceptibly increased in proportion as a larger bulk of fluid is ingested, and that of the glucose is similarly influenced by an augmented consumption of farinaceous principles.

3. Regimen should incontestibly have a prominent position in the treatment of glucosuria. Milk, fatty matters, butter, oil, eggs, and meat, ought to form the bulk of the patient's food.

4. Total abstinence from farinaceous substances seems necessary to cause a complete disappearance of glucose from the urine.

5. Small quantities of bread (between three and four ounces a day) are generally well borne, and do not cause the reappearance of the sugar in the urine when the glucose has once ceased to be produced.

6. The powers of assimilation gradually increase, and it is possible, by means of chemical analysis, to demonstrate the point at which it is necessary to stop.

7. Regimen is powerfully seconded by certain medicines, and more especially by the use of opium in progressive doses, and of alkaline drinks:—in this disease the tolerance of opium is very great.

8. The glucose is undoubtedly produced in the digestive organs, but it is generally again removed by absorption, so that the solid fæces do not contain a trace of it.

9. Purgatives may diminish the quantity of glucose in the urine by removing with the fæcal matters a greater or less amount which would have been eliminated with that secretion.—*Bulletino delle Scienze Mediche di Bologna.* January, 1854, p. 60.

On the Etiology of Glucosuria or Saccharine Diabetes. By PROFESSOR MAURIZIO BUFALINI.

THE following are Professor Bufalini's conclusions:—

1. Glucosuria may undoubtedly proceed from congenital predisposition.

2. The condition of body of persons ascertained to be most subject to this affection is connected with the prevalence of the albuminous state, or at least, with the impairment of the organic metamorphoses effected by means of the influence of oxygen.

3. Previous diseases, and habits of life tending to strengthen predispositions to glucosuria, are exclusively those which cause the organic processes to retrograde from their more perfect state.

4. Powerful epidemic influences of a like effect may also predispose to glucosuria.

5. The efficacy of a vegetable, and especially of a farinaceous diet in producing such a predisposition is very probable.

6. Humidity combined with a low atmospheric temperature, disturbing the cutaneous functions, influences the production of glucosuria; and it would appear that this takes place rather by its long-continued action as a predisposing cause, than by a violent and sudden action as an occasional cause.

7. Glucosuria arises most frequently rather as the effect of predisposing than as that of occasional causes, which generally are not perceived, or do not really exist.

8. When once established, farinaceous food has the property of increasing it, animal food of diminishing it.

9. Etiological considerations in reference to it do not at all explain the reason of the generation of sugar, but prove that a morbid formation of glucose is taking place in the stomach.

10. This alone does not appear, from the examination of the causes of glucosuria, to be a sufficient source of diabetic sugar.

11. However it may be, there is evidence enough to prove that glucosuria does not originate without a most singular combination of influences disturbing the organic assimilations, and that we ought, therefore, to regard it as a disease proceeding from a very complicated cause.

12. Its rarity is to be attributed solely to the great difficulty of uniting all the elements of action necessary to produce its cause.

13. Lastly, it is sufficiently manifest that there is an absolute antagonism between the generation of glucosuria and that of the true phlogistic diathesis.—*Bulletino delle Scienze Mediche di Bologna.* January, 1854, p. 59.

On the Existence of Starch in the Human Brain. By Dr. F. C. Donders, Professor of Medicine in the University of Utrecht.

Some weeks ago I read a communication by Rudolph Virchow, the title of which, "on a substance discovered in the human brain and spinal marrow, with the chemical reaction of cellulose," excited my attention. In the paper alluded to Virchow states that the so-called *corpora amylacea* of the brain acquire on the addition of iodine a light bluish tint (which action is, however, foreign to moist cellulose), and, on the subsequent addition of sulphuric acid, exhibit the beautiful violet, produced in cellulose by this reagent, and which here comes out more strongly by being contrasted with the surrounding yellow, or brown-coloured nitrogenous matter. These so-called cellulose-corpuscles he found in man in the substance of the membrane lining the ventricles and its processes; in the child he failed to discover them, nor were they met with in rabbits.

A couple of days after I read Virchow's communication I was performing a dissection, and wished, in passing, to demonstrate this remarkable fact to my pupils. Great was my surprise when I saw these corpuscles, under the influence of iodine dissolved in a solution of iodide of potassium, quickly assume a dark blue colour at the edge, while those in the middle of the thin layer which had been cut off exhibited, in the first instance, a brown colour, which also gradually gave way to purple, blue, and dark blue.

It thus appeared that it is entirely superfluous to employ sulphuric acid to obtain the blue colour, and from the characteristic form of these corpuscles, which is not to be distinguished from that of starch bodies from the vegetable kingdom, while cellulose nowhere occurs under a similar shape, I could scarcely hesitate to infer that what Virchow had designated cellulose was in reality starch.

In three other bodies I proved the same,—a fifth, that of a man 76 years of age, afforded me an opportunity of accurately investigating these corpuscles. In this case they formed an almost complete layer in the membrane investing the fourth ventricle, and were moreover unusually large. I could with the greatest ease isolate hundreds of them, and I observed that they almost immediately assumed a dark blue colour, on the addition of the above-mentioned solution of iodine. When the latter was added in very small quantities the blue coloration was preceded by a yellowish tint, which perhaps depended on adherent, or in some measure imbibed, nitrogenous matter; but the colour quickly became as dark a blue as that of wheat-starch similarly treated. If they are not isolated, and are contained between the filaments of the membrane, a much longer time elapses before the change to a blue colour takes place, which is to be ascribed to the slow imbibition, and did not escape Virchow's observation. Besides, they then become first of a dark yellow, leading us to suspect that they are as if encysted in a denser nitrogenous tissue, which remains when they became isolated. The effect of the sulphuric acid probably consists in its making the globules more easily accessible to the iodine. Various reactions, as the effects of acids and alkalies, boiling, &c. may also be quoted against the cellulose theory. Thus alkalies rapidly produce great swelling, even of the non-isolated corpuscles, while fine cellulose has not this property, and the walls of some vegetable cells appear to owe their tumefaction to the fact of their containing pectin. After boiling, during which they swell up, the colour becomes immediately, while they are enclosed in their investing membrane, violet, and subsequently blue, without previously assuming a yellowish-brown. I was disappointed to find that I could not satisfy myself as to the existence of a depolarizing power, which is so evident in potato starch, and is absent in cellulose. Though this would have made the starchy nature of the corpuscles still more plain, its absence cannot be quoted as disproving this view of them. Wheat starch, too, exhibits this phenomenon much more feebly, and on comparison it appeared that it was not to be observed in corpuscles of this substance of equal magnitudes with those of the investing membrane (ependyma). The tissue of the investing membrane itself is depolarizing.

The starch corpuscles of the investing membrane most resemble those of wheat. They are, however, distinguished from the latter by the largest being much smaller than those of wheat, and by considerably less of the minutest kind we meet with in this grain, occurring amongst them, and also by their being more spheroidal and less flattened; twin corpuscles too, which very often occur in the vegetable kingdom, but not in wheat, are to be found among them. It likewise appears that they are less strongly acted on by potash of equal strength than the wheat corpuscles are. I have already stated that, without previous boiling, they assume at first, through the action of iodine, more of a yellowish-brown colour.

As to their origin, I can offer no opinion. Neither their formation in that situation in a manner so different from that in plants, nor their passage into the blood, and their deposition, perhaps solely in the investing membrane, can be looked on as satisfactory. Against the latter view, too, it may be mentioned, that I am acquainted with no starch corpuscles occurring in our food, which exactly agree with them in form and size. As, however, I, with Dr. Alderts Mensonides, formerly observed starch-corpuscles in the blood contained in the blood-vessels of frogs, into whose stomach I had introduced starch, I think it would be worth while to see where starch injected into the veins of animals should be found. The results of these experiments I hope to communicate in a subsequent Number.—*Nederlandsch Lancet*, No. 4 and 5, 1853, p. 278.

[Want of space prevents us giving in connexion with the foregoing a translation of Professor Virchow's original memoirs on the subject, published in the first and second Numbers of the sixth volume of his *Archiv für Pathologische Anatomie und Physiologie.* The following abstract of his observations, with remarks by Professor Henle, we take from that important work and faithful record of the progress of medical science, *Canstatt's Jahresbericht über die Fortschritte der Gesammten Medicin in allen Ländern*, for this year.]

Virchow has recently made known a new species of metamorphosis of cells, the cellulose-metamorphosis. He found that the so-called *corpora amylacea* of the brain assume, on the addition of iodine, a pale bluish tint, and that when sulphuric acid is superadded, they exhibit the beautiful violet colour known to belong to cellulose. In Virchow's first communication it was stated that series of bodies of this kind, cellulose-corpuscles, occur only in the lining membrane (ependyma) of the ventricle and its processes; being met with most abundantly in the deeper layers of this membrane, on the septum, fornix, in the stria cornea in the fourth ventricle, also in the gray substance of the spinal marrow, in the situation where the medullary canal terminates in the fœtus. However, similar bodies were found by Meissner in the acoustic nerve of the deaf and dumb, and, as Rokitansky had before observed them in an atrophied optic nerve, they were seen by Kölliker in the retina, and by Virchow himself in the acoustic and olfactory; although Virchow hence drew the conclusion, that a substance similar to the ependyma is continued through their centres, into the higher nerves of sense, he appears, according to a more recent statement, to have relinquished this view of the relation of the corpora amylacea to the ependyma, after Rokitansky had communicated to him their occurrence in rachitic bones; Luschka had described them in the Gasserian ganglion of an old woman, Meissner in the cysts of a polypus of the ear, Wedl in an hypertrophied heart,—and he himsef had been convinced that the sago-like corpuscles of the so-called lardy or waxy spleen consist of elements which do not indeed exhibit the concentric streaks of the corpora amylacea of the brain, but yet afford the same chemical reaction. Meissner, in addition, states as situations, in which the corpora amylacea are found, many pathological new formations, the synovia of joints, and several dropsical fluids, earwax, many kinds of nasal mucus, pus, and urine. Förster classes layers of bodies taken from alveolar cancer with the corpora amylacea. Meissner tested the behaviour of the corpora amylacea towards reagents; to most they were indifferent, yet they were not all alike in this respect. On one occasion one set of concentric bodies found in a colloid fluid were coloured violet, and subsequently dissolved by concentrated hydrochloric acid, while another set were coloured yellow, and were not dissolved. In several, reddish layers were found,—sometimes the middle portion consisted of red substance; when set in motion they appeared like arched discs. Pressure on the covering glass caused them to separate in a radiating form; they also separated spontaneously. According to Rokitansky, they dissolve in ether, and on the addition of warmth are dissolved both in the original fluid and in the same diluted with water. The course of their solution differs from that of the starch bodies in their first swelling up without becoming fissured, and in their disappearing with a jerk. Luschka's corpora amylacea did not exhibit the concentric layers until after the addition of hydrochloric acid; they previously presented an uniform dull white appearance.

Virchow points out the great power of resisting putrefaction possessed by the corpora amylacea. In his first communication he submits the question whether they may not perhaps be formed from the nuclei of the ependyma. In the second he considers their origin from cells, especially that of the corpora amylacea of the spleen from the lymph-corpuscles of the latter, to be decided,—relying, it would appear, on the statements of Schrant, who says he has observed, contemporaneously with the colloid-metamorphoses of the cells of the Malpighian corpuscles of the spleen, a swelling of these cells and their confluence to form larger masses. Förster supposes that the concentric layers of many corpora amylacea have advanced by continuous endogenous enclosure into colloid nuclei.

"It seems," remarks Professor Henle, by whom the foregoing abstract was drawn up, "to have escaped the above-mentioned observers that I, so long ago as 1849 (*Zeitschrift für rationelle Medicin*, *Bd.* VII. p. 411) have traced the origin of the corpora amylacea or cellulose-corpuscles, which I described under the name of Hassall's concentric bodies, to the fat of the granule-cells. The substance which exhibits the remarkable concentric striation grew under my eyes as it was separated from the granule-cells; consequently, I am quite certain that the concentric bodies are not metamorphosed cells. From their shining appearance, their similarity to the medullary substance of the nerves, and their origin from fat molecules, I pronounced them to be fat, and this view, in respect to which the reactions described by Virchow might raise a doubt, is now justified by Meckel's discovery, that all masses of cholesterine, whether crystalline or granular, are coloured successively violet, indigo, sky-blue, and finally, green, by iodine and sulphuric acid. Of the corpora amylacea, Meckel says, with reference to Virchow's explanation of them, that they never show the pure blue reaction of starch, but that from their violet colour they are rather to be regarded as formations from cholesterine, which (in the case of those of the brain) arise as concretions from the *effete* nervous substance. The modification of fat or cholesterine which furnishes the Hassall's bodies is designated by Meckel "lard violet" (Spekviolett); the similarity of the layers of globules and cylinders with globules and fibrillæ of the medullary substance of the nerves, struck him as well as me.—*Canstatt's Jahresbericht*, 1854, Erster Band, s. 21.

[An examination of the foregoing papers will prove that the nature of the bodies in question has not been as yet precisely determined. Mr. Busk, wishing to verify the observations of Professor Virchow, examined the brains of one or two individuals; in one, that of a young man who died of the consecutive fever of cholera after an illness of five or six days, he found the corpora amylacea in enormous abundance, but he states in the Quarterly Journal of Microscopical Science for January, 1854, that the corpuscles were starch, and not cellulose, and that they possessed all the structural, chemical, and optical properties of starch, as it occurs in plants. He thus corroborates the view put forward by Professor Donders. The weight of evidence would therefore appear to be in favour of the opinion that they consist of starch. Until we saw that they have been found under so many other circumstances, we were inclined to think their occurrence in paralyzed and atrophied nerves favourable to Henle's view, and that they might be the result of some form of fatty degeneration.—ED.]

On Circular Cauterization of the Base of Internal Hemorrhoidal Tumours complicated with Prolapse of the Mucous Membrane of the Rectum. By DR. ALPHONSE AMUSSAT, JUN.

THE number of works which, both in ancient and modern times, has been published on the subject of hemorrhoids, the place which this affection occupies in pathological treatises, and the various remedies proposed against it, testify at once to its frequency and its importance. The question, so long debated, of the expediency of surgical interference in affections of this nature, has not yet been decided in the minds of all practitioners, and I have no intention of entering here on a discussion which would lead me beyond the limits I have laid down for myself. A survey of our periodical literature will at once show the efforts which the most distinguished physicians and surgeons of all countries have made, especially since the commencement of the nineteenth century, to facilitate and render more certain the cure of this disease, whether, in its simple form, it constitutes principally an annoyance and an inconvenience, or complicated with ulceration, severe hemorrhage, or prolapse of the neighbouring rectal mucous membrane, it threatens life, or slowly exhausts the patient's strength. The therapeutics of this affection are consequently more than ordinarily rich in medicines, and varied operative proceedings.

For my part, whenever hemorrhoids are of long standing, voluminous, ulcerated, accompanied by prolapse of the mucous membrane of the rectum, or with copious hemorrhages; when they affect the general health; and when the more ordinary therapeutic means have failed, and no special contra-indication exists, I remove one or more according to their number and volume.

During twenty-five years that my father has pursued this plan, the destruction of the hemorrhoids, combined with the precautions he has recommended to the observance of his patients, has never given him other than satisfactory results, both as respects the local condition of the parts, and the state of the general health.

Prolapse of the mucous membrane of the rectum, being one of the most frequent complications of confirmed and long-standing internal hemorrhoids, has appeared to me worthy of fixing our attention, both as to its etiology and its treatment. Admitted by most authors, this prolapse is easily explained when we carefully study the course of the principal affection. In the beginning, hemorrhoids appear as the effects of hereditary predisposition, of constipation, a sedentary life, the abuse of stimulants, or of a too nutritious diet, and are at first formed only by a determination of blood to the vessels of the inferior extremity of the rectum; little tumours, invisible externally, are soon developed, and become the seat of itching and of tension, which increase under the influence of the producing causes, often disappear to return again, and are, in a great number of cases, accompanied by more or less abundant hemorrhages.

The affection in this simple state belongs to internal pathology, and a return to suitable hygienic rules, or the adoption of a very simple antiphlogistic treatment is, most frequently, sufficient to overcome it. But when, continuing to be developed, the hemorrhoidal tumours have acquired a certain volume, they begin to appear at the anal orifice, which they more or less obstruct; and however little the patient may be constipated, as is most usually the case, the hardened fæcal matters push down the tumours before them during the action of the bowels. The consequence is, that the mucous membrane of the rectum, necessarily following their movements, becomes as much lengthened as possible; but soon this extension ceases to be sufficient; united to the muscular membrane by a loose cellular tissue, it is gradually separated from it, and subsequently returns with progressively increasing difficulty, being retained externally by the hemorrhoidal masses, and the sphincter compressing them. If the patient, induced by deceptive inclinations to go to stool, by pain or any other cause, acquires a habit of making prolonged efforts at defecation, the hemorrhoids increase, and the prolapse of the mucous membrane augments to that point, that it soon becomes impossible to return it after each motion without the employment of a regular taxis. By degrees, the sphincter becoming relaxed, the hemorrhoids come down on the least movement; at last a period arrives when they remain constantly out, unless they are retained by a bandage specially adapted to the purpose, the presence of which—always inconvenient—finally becomes insupportable. These facts I have verified in a sufficiently great number of patients, and I shall hereafter quote cases which will establish them.

In some very rare instances a protrusion of the rectum and internal hemorrhoids coexist; we have, then, two distinct affections to treat. During ten years that I have attended my father's practice, I have only once had an opportunity of observing this coincidence[a], while I have often seen long-standing voluminous hemorrhoidal tumours accompanied by a more or less extensive prolapse of the rectal mucous membrane.

Since the month of April, 1844[b], the date of the first employment of the cauterization of the base of hemorrhoidal tumours with grooved forceps charged with Filhos' caustic, the idea of which originated with me, we had perceived that this new mode of operation enabled us to obtain the cure of hemorrhoids, and that the hemorrhages, ulcerations, &c., disappeared together with the tumours; but it remained to be shown whether, in cases in which these affections should be complicated with tolerably extensive prolapse of the rectal mucous membrane, cauterization by the same plan would remedy the principal affection and its complication. Experience has not been tardy in justifying the hope we had entertained in this respect. It is, moreover, easy to account for this result, which we verified in all our operations of this kind, in reading the description of our proceeding. The cases of the patients in whom this complication was sufficiently advanced, and the drawings taken from nature, which I have appended to them, will, I trust, enable practitioners to understand it.

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[a] Mémoire sur la destruction des Hémorrhoïdes Internes, par la Cauterisation circulaire de leur Pédicule. Par J. Z. Amussat. 1836. Page 23.

[b] Ibid., p. 32.

When we are about to examine a patient whom we suppose to be affected with internal hemorrhoids, we cause him to place himself on a vessel, and to make efforts at defecation; the tumours then come down, and we easily demonstrate their presence; often they even permanently appear externally, or show themselves on the exercise of the least effort. But as it is necessary to judge precisely of the extent of the prolapse of the mucous membrane of the rectum, we advise the patient to take a lavement, and to pass it again in our presence some moments after, using efforts, and continuing the latter when he gets up. With the assistance of this mode of investigation, we arrive at an exact appreciation of the extent of the affection, and the operator is enabled to judge beforehand at what height he ought to place the *porte-caustique* forceps, in order to cure at once the hemorrhoidal affection, and the rectal prolapse which complicates it.

The introduction of the index finger into the rectum is a means of diagnosis on which we must not place too much reliance, for I have known several patients who, examined in this manner by the most distinguished practitioners, had been declared not to have hemorrhoids, and in whom I, nevertheless, found even voluminous ones. The surgeon accustomed to this mode of examination, indeed, experiences internally a peculiar sensation of softness in certain points, proves the existence of inequalities rather than of tumours disappearing under the finger, and gives pain to the patient when the tumours are ulcerated; but in general these signs are not sufficient to enable him to affirm whether a hemorrhoidal affection exists or not. The rectal *toucher* is especially useful in ascertaining whether any particular complication, such as a stricture, polypus, or cancer, coexists.

At the same time we examine the number of tumours which ought to be cauterized, as, for the following reasons, we never destroy them all:—In order not to suppress suddenly and completely a state to which the system has long been accustomed, and not to expose the patient to a disturbance which might not be free from inconvenience; besides, experience has shown that when we have destroyed the more voluminous tumour when there are two, or the most voluminous ones when there are more, those which remain diminish and give much less inconvenience. The cauterization of the largest hemorrhoid, when well performed, often prevents the others coming out, and the ulcerations, if such exist, being no longer subjected to a continual friction against one another, cicatrize, and the patients enjoy as good health as if they had been completely freed from them. Consequently, a different mode of proceeding would be at least useless, and might sometimes be dangerous. If, contrary to what usually occurs, the patient should subsequently suffer, recourse might be had to the operation, which would not then be more severe than before, and would remedy an inconvenience which we sometimes meet with, but which much more frequently does not present itself.

In ordinary cases I employ my forceps in the form of a compass with protecting blades,—more convenient when it is necessary to carry the cauterization to an elevated point of the rectum,—but in the case of which I am now speaking, I prefer the T-forceps of my father, or those which I have had made on the same plan, with very slight modifications. In fact, when there are voluminous hemorrhoids, with more or less extensive prolapse of the mucous membrane, the tumours expanding largely externally, it is very easy to cauterize their base.

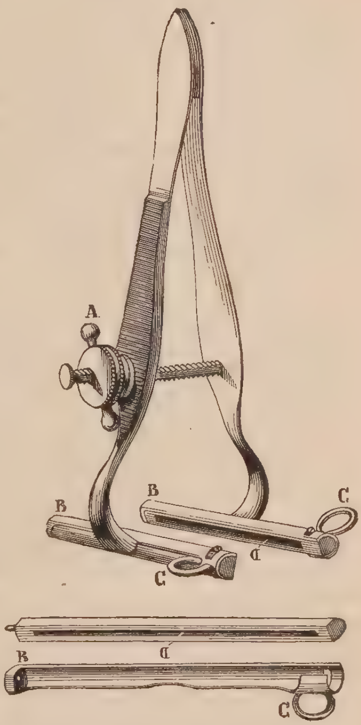

Fig. 1.

Since the month of June, 1844, the period of the construction of my first grooved forceps for the cauterization of internal hemorrhoids, we have subjected both the instruments and the operative manipulation to numerous modifications, which have made the operation so simple that a perusal of the description of it will render its application easy; and already distinguished surgeons, among whom I would mention MM. Maher, J. Roux, and Laurencin, Professors in the Schools of the Imperial Marine, MM. H. Larrey, Barthélemy, Martin Saint-Ange, Thirion (of Namur), Mascarel, &c., have employed this proceeding with success, using instruments made on the model of ours, or having the greatest analogy to them.

The T-shaped porte-caustique forceps of my father, a drawing of which is given above[a], was made on the model of a little forceps he used for rupturing the internal membranes of arteries, in order to facilitate torsion. This instrument is composed of two legs, united at one of their extremities by a spring; at the other they are furnished with two grooved semicircles of steel, D, perpendicular in their direction, and so arranged as to oppose one another when the forceps is closed, or when it embraces the base of the tumour which it is wished to cauterize. Two small sliding plates, B, having a movement of rotation around the grooves, which are cylindrical, have at one of their extremities a small handle, C, intended to be used for moving them, and consequently to cover or uncover the caustic when it is thought advisable to do so. A screw, A, is used for tightening the legs of the instrument. The two sliding plates, to which I have given the name of protectors, have partly replaced the preserving forceps which we originally used for completely isolating the tumours from the surrounding parts previously to cauterizing them. When the protectors are placed in front of the grooves, the caustic being entirely covered, we may seize the tumours, let them go again, take hold of them, or slide the grooved semicircles to a greater or less height without the patient experiencing the slightest painful sensation.

To fill the grooves of the instrument, I employ Filhos' caustic in paste, or solid. The caustic paste is made by throwing a sufficient quantity of pulverized Filhos' caustic into a saucer, adding some drops of alcohol or eau de Cologne, and triturating the mixture with a spatula. When the paste has the consistence of ordinary honey it is placed in the grooves, and covered with the protectors. To fill them with solid caustic, the latter is poured into them while in state of fusion.

I have had forceps made on this model with but a very slight difference, as may be seen by the figure on the opposite page. This instrument, to which I have given the name of *pince porte-caustique à étau* (these instruments have been made in the manufactories of M. Charrière), constructed at once on the model of my father's forceps, and of a little hand-vice, differs from his instrument in this, that the grooves, B, which are movable on their axis, being placed in other grooves, A, attached to the legs of the forceps, may be withdrawn, and have the fused Filhos' caustic easily poured into them; besides, the resistance of its legs admits of the tumour being compressed as with a vice, and of the production of mortification by pressure. This forceps acts then at the same time by cauterization and pressure combined, and allows us to operate more rapidly, since each of these actions is separately sufficient, though it requires more time, to accomplish the mortification of the tumour. When about to use these forceps, the grooved pieces, B, are withdrawn, and fused Filhos' caustic is poured in so as to be level with the edges without overflowing them; should it overflow, it must be rubbed off with a cloth, or a piece of pumice stone, until it is exactly level; the two little grooves are then enclosed in a ground glass stoppered bottle filled with powdered lime, in order to preserve the caustic from the contact of the air, and from moisture. At the time of operating they are well wiped and replaced in the forceps, and turned round, so as to cover the caustic until the moment when it is to act upon the tissues. To effect the cauterization in this particular case I prefer the T-forceps, because their grooved portions being parallel, they exercise upon the tissues a pressure in every sense equal; but this operation may be performed with the different forceps which have been invented for cauterizing hemorrhoids; we may, even more easily than in other cases, cauterize the tumours with a cone of Filhos' caustic, as I shall hereafter describe.

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[a] This forceps is drawn one-third less than its actual magnitude; the groove and blade, separately represented, are of the full size.

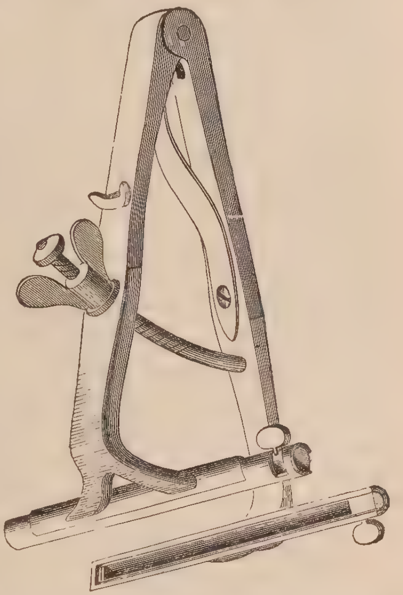

Fig. 2.

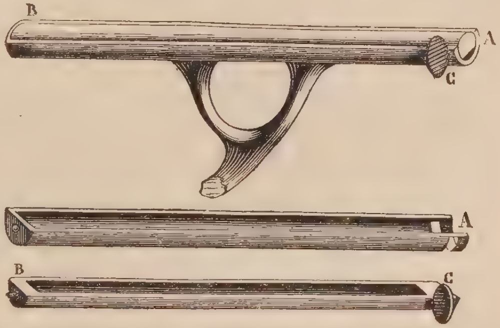

Fig. 3.

Internal hemorrhoids are often complicated with corresponding external hemorrhoids, or rather with swellings forming two rows of superposed tumours. Experience has proved that it is not necessary to destroy the external swellings—they die away when the internal hemorrhoids have been destroyed by caustic.

The operation having been decided on, I generally prepare the patient for several days previously with depuratives, baths, and mild regimen, even venesection, if it should appear necessary; and the evening before the operation I prescribe a purgative of cold-drawn castor oil, in order to unload the bowels, and to prevent the occurrence of alvine evacuations for two or three days at the least.

The articles necessary for the operation are: one or two porte-caustique forceps; pulverized Filhos' caustic; alcohol or eau de Cologne; a sheet folded square; a piece of oilcloth; a syphon for continuous irrigation; a syringe, or a clyso-pump; two large vessels, one to contain cold water intended for the irrigation to be carried on during the operation; the other to receive the fluid when it shall have passed over the anus.

Before the operation the bed on which it is to be performed should be arranged. The folded sheet is placed across it, and is covered with an oilcloth reaching to the vessel placed under the edge of the bed, to receive the water projected during the operation; and in order that the latter may flow off easily, the two inferior angles of the oilcloth should be pinned together, so as to form a channel to carry the water directly into the vessel intended to receive it.

The patient, having taken a lavement during these preparations, passes it again, at the moment of operation, into a vessel left near the bed, and then lies down, still keeping up the efforts at expulsion, which are indispensably necessary to allow the surgeon to place the forceps properly.

The position of the patient which I prefer is the same as that for the operation for fistula in ano. Doubtless, if the patient were on his knees, or placed as for the operation of lithotomy, he would be better circumstanced for keeping up the efforts; but notwithstanding the advantage the operator might have by employing one or other of these positions, I have renounced them on account of the fatigue the patients experience—a degree of fatigue which once seemed to me to have occasioned syncope.

I am not in the habit of submitting my patients to the action of anæsthetic agents unless they earnestly request it; knowing by experience that the operation is not sufficiently painful to render their employment necessary, for under the influence of the very strong compression used, and of the douches of cold water, the pain is easily borne. During the operation the patient feels a pinching which, in a great measure, masks the pain of cauterization, and consequently only complains of the latter at the moment of the withdrawal of the instrument. This smarting, besides, is diminished rapidly enough by the means I employ immediately after the operation. Two assistants placed at the sides are engaged in holding back the neighbouring parts; a third is occupied in directing a continued stream of cold water on the anal region. Strictly speaking, one assistant, and that even a non-medical person, might be sufficient, as he would only have to work the piston of the instrument, for the operator could direct the current of liquid with the left hand, while he held the forceps in the right, but it is much more convenient to be assisted by several persons.

The patient having been placed on the bed in the manner described, and continuing the efforts at defecation made in passing the lavement, the assistants carefully keep back the surrounding parts. The operator, holding in his right hand the porte-caustique forceps

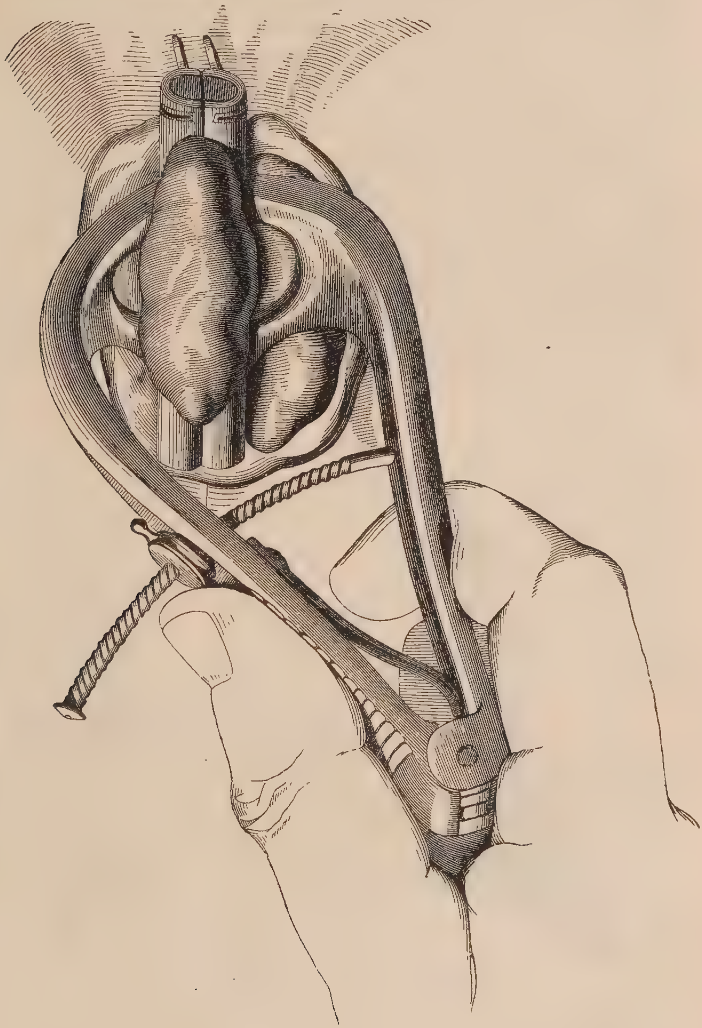

Fig. 4.

This figure represents a voluminous tumour caught with my forceps and vice with the caustic acting. For the representation of the pathological state see Fig. 8.

with its troughs covered, so as to be able to touch the tissues without causing the least painful sensation, seizes the tumour gently, without compressing it, and desires the patient to make efforts, if possible, still more energetic, in order to allow him to pass the instrument to the height he judges advisable. This period of the operation, very important in all cases, is especially so in this. When the forceps is well placed, he tightens the screw sufficiently to prevent the tumour escaping, but so as to be able, with ease, to turn the grooved pieces or the protectors. When the caustic is in contact with the tissues, the instrument is tightened as much as possible, but gradually, in order to bring the compression to its maximum. By acting thus, the duration of the operation is shortened, and the pain is diminished, the patient most frequently complaining only of the pressure. The douche of cold water is immediately commenced, and continued while the operation lasts, which varies from two to four minutes. With strong forceps and fused caustic two minutes are longer than is necessary for cauterization. The time, however, as may be supposed, varies according to the bulk of the tumours to be destroyed.

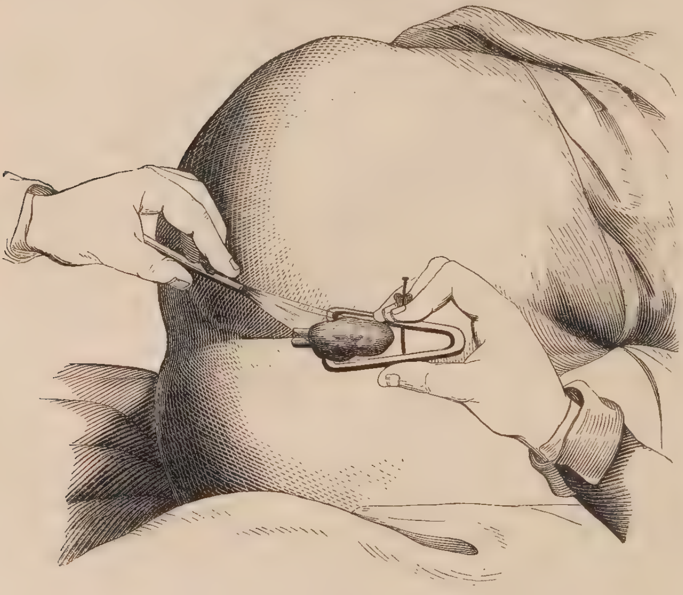

Fig. 5.

This figure represents the operator holding with his right hand the forceps placed upon the tumour, and directing the jet of cold water with the left.

The instrument is then gradually loosened and withdrawn, care being taken to re-cover the grooves to prevent the caustic touching the neighbouring tissues. The assistants should keep the parts separated, and the patient should be again desired to make efforts at expulsion, that the cauterized tissues, on which a little caustic, the action of which is not yet over, still remains, may not cauterize those which should be protected.

The operation being over, the douches of cold water both on the anus and internally should be continued so as to neutralize the last portions of caustic which may not have acted. I have often, with advantage, applied olive oil or vinegar and water to the cauterized parts.

Should a porte-caustique forceps not be at hand, the operation might be performed as follows:—The patient having been placed in the position I have described, and the same preparations having been made, the tumour it is wished to destroy should be seized, as high as possible, with an ordinary dressing or dissecting forceps, and cauterized directly, by placing in the centre a stick of Filhos' caustic cut into a conical shape, to which a rotatory motion should be given to make it penetrate the hemorrhoid, so as to destroy it centrally and laterally. It would be necessary, during the operation, to protect the surrounding parts with spatulas or paper-knives, and afterwards to wash the cauterized tumour with slightly acidulated water, so as to neutralize all the caustic which might not have combined with the tissues. The subsequent treatment should be precisely the same as in the ordinary proceeding.

Immediately after the operation the patient is placed in a large bath, and when the tumours have been bathed for some moments, they are returned. He remains in the bath for an hour, and sometimes longer, and always experiences great relief from it; for it is then he feels the action of the caustic, which had, during the operation, been masked by the pressure.

On coming out of the bath, cataplasms of linseed meal enclosed in muslin bags are applied to the anal region, or irrigations of tepid water are directed to the part if smarting is still felt. The pain which patients experience after the operation is very variable; I have seen some who felt very acute smarting for twenty-four hours; but with the majority the painful sensation is, after some hours, but slight if the precautions already mentioned have been observed. Some of my patients do not go to bed even the day of the operation; in general they remain sitting or lying on a sofa—for walking causes pain—and they are unable to go out for some days; elderly patients generally keep their room for a fortnight.

After the operation I allow but little nourishment, and that of a nature admitting of easy assimilation, in order to avoid action of the bowels, which always occasions acute pain. When the patients feel a desire to go to stool, I advise them to inject into the rectum two ounces of lard melted in a water-bath; it is useful in facilitating the passage of the fæcal matters, and in diminishing the smarting caused by the motion. A tepid sitz-bath should be taken immediately after the stool. Sometimes I give, during the treatment, a gentle purgative, in order to remove constipation when the eschar is not yet detached; while it is, on the other hand, advisable that the patient should not go to stool at the time when the cauterized tumour is separating, in order to avoid the flow of blood which might then take place. An examination of the parts enables us to get a glimpse of the cauterized hemorrhoid, and to ascertain whether elimination proceeds more or less quickly; experience, however, has shown that, in general, the older and weaker the patients are, the more slowly this process goes on. The falling off of the eschars requires a very variable time, generally from five to eight days; I have seen some become detached at the end of seventy-two hours, while in other patients they were still adherent fourteen days after the operation. To render the consequences of the operation as favourable as I have described, the patient ought to take every day several sitz-baths at a moderate temperature, rather cool than warm, to keep cataplasms or water-dressing constantly on the anal region, and to use a very light diet. When the swelling has disappeared the same treatment should be continued for some days, but the nourishment may be gradually increased; we may then, with advantage, form our opinion of the result of the operation, and decide whether it is necessary to cauterize other hemorrhoids.

Such are the operative manipulation and the treatment I employ in the affection under consideration; the following cases will enable the reader to judge of their practical value.

[The author then details a case of internal hemorrhoids, with prolapse of the mucous membrane of the rectum, treated with circular cauterization of the base of the most voluminous of the tumours, with a T-shaped porte-caustique forceps with projecting plates, and terminating in cure. The patient was a merchant, sixty-eight years of age, of temperate habits, but always subject to constipation. From the age of twenty-six he had suffered from hemorrhoids, accompanied by losses of blood, and it appeared that every two months he experienced a sort of very painful hemorrhoidal crisis, followed by a flow of blood which brought relief. During the last ten years the tumours had come down while walking or making efforts at defecation, and as the inconvenience and pain attending them continued to increase, Dr. Nacquart, on the 11th December, 1846, called in the author and his father. The operation was performed on the 14th, and lasted two minutes and a half; the following day there was headach and slight fever, which, however, soon passed away. On the 21st the shreds of the cauterized hemorrhoid had fallen off, the volume of the tumours becoming progressively less. On the 25th, notwithstanding the efforts the patient was encouraged to make, nothing was found in the situation of the cauterized hemorrhoid but a small, granulating, suppurating surface; the external tumours being, at the same time, very much flattened. On the 4th of January the patient informed his attendants that his efforts at defecation had ceased to be attended with any protrusion; he was able to sit and to walk for a long time without feeling pain, and the external swellings had almost disappeared. The author saw this patient again on the 8th of March, 1852; since the operation he had enjoyed a degree of health to which he had previously been a stranger, and the result of the cauterization had continued as just now described.]

[The second case described by the author, of which, as well as the remaining cases, we shall, as we have done in the preceding instance, give only an abstract, was likewise one of internal hemorrhoids, with prolapse of the mucous membrane of the rectum, and was cured by circular cauterization of the base of the tumours, with a porte-caustique forceps. It occurred in an attendant in a workhouse, aged forty-six, of strong constitution and good general health, except that he had always been subject to constipation, and had for the last fourteen years suffered from piles, with frequent pains about the anus, and discharges of blood at stool. The hemorrhoids had latterly greatly increased in volume, and came down when the bowels acted, bringing with them a portion of the mucous membrane of the rectum; so that the patient was careful to go to stool in the evening, because the tumours returned more easily during the night, while in the daytime he had much difficulty, and often failed in returning them; at such time the friction of the shirt caused great pain, and frequently the patient could scarcely sit down. His general health becoming impaired, he applied to the author's father, who, on the 1st of March, 1848, made a circular cauterization of the left half, circumscribing the base of the tumour with a T-shaped porte-caustique forceps with protecting plates, charged with Filhos' caustic, and placed as high as possible. The cauterization lasted about three minutes; the patient suffered little, and the cauterized hemorrhoid separated on the fourth day.

On the 15th of March, 1848, the patient was examined by MM. Lallemand de Montpellier, Beauvieux, Remondet, and Chaussat, who ascertained that but half of the hemorrhoidal swelling remained. This was removed by a second application of the T-shaped forceps, charged with caustic, and allowed to remain on for three minutes. On the fourth of April the mucous membrane of the rectum had ceased to come down, the linear cicatrix of the cauterized hemorrhoids was situated about the fifth of an inch above the orifice of the anus.

This patient was seen again on the 5th March, 1849. The cure was complete; he no longer suffered at stool, there was no hemorrhage, and the constipation had ceased. No trace of the hemorrhoidal tumours or of the mucous membrane of the rectum was perceptible externally.]

The foregoing case affords an illustration of the difficulty we sometimes experience in forming an accurate diagnosis of the affection. In fact, on the first examination I made of the anal region, I thought the patient suffered from a simple prolapse of the mucous membrane of the rectum, and were it not for the abundant losses of blood he had, joined to his other antecedents, I should have thought that this was his disease. But on a second investigation, made after the administration of a purgative, the vascular element became much more apparent; there was no longer any doubt that hemorrhoidal tumours existed with prolapse of the rectal mucous membrane. We see from this how useful it is to examine patients after the administration of a purgative, in order to be able to establish with precision the diagnosis of the affection. As to the surgical treatment, it ought, I think, to be the same in both cases, as I shall show at the close of this essay.

[The third case was one of—

Internal Hemorrhoids with Prolapse of the neighbouring rectal mucous membrane; Circular Cauterization of the base of the most voluminous; Cure.— The patient, aged fifty-four, of strong constitution, had enjoyed excellent health to the age of eighteen years, when he got syphilis, for which he underwent a full course of treatment. At the age of nineteen, being garrisoned on the frontiers of Spain, he was attacked with intermittent fever of a tertiary type, which lasted eighteen months; from that period he enjoyed good health until he attained the age of forty, when he quitted active military service to enter an office under the Minister of War. This change of life was not advantageous to him, for in 1843 he began to experience general *malaise*, headach, oppression of the chest; he lost his appetite, became dyspeptic; suffered from severe attacks of pain at the anus, in the abdomen, and sometimes in the genital organs; he occasionally felt great smarting in the urethra while passing water. His motions became difficult and painful, and to relieve his sufferings he had frequent recourse to baths and lavements.

In 1848 the hemorrhoids, which had not hitherto appeared externally, began to come down; he lost blood at distant intervals, which gave him some relief.

In 1849 his digestion improved, but he lost blood every day, and was besides obliged to return the part every time he went to stool.

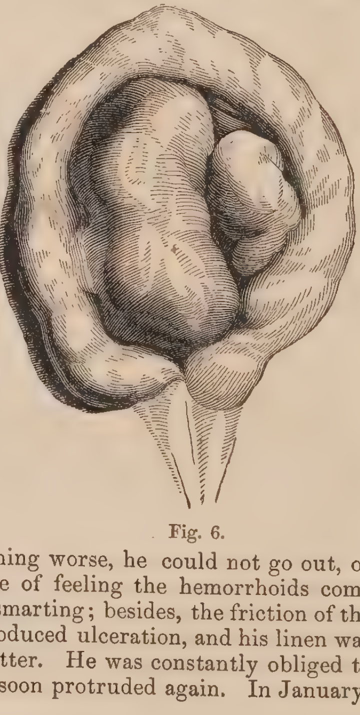
Fig. 6.

In 1850, the affection becoming worse, he could not go out, or walk without the inconvenience of feeling the hemorrhoids come down, and experiencing severe smarting; besides, the friction of the tumours against one another produced ulceration, and his linen was stained with muco-purulent matter. He was constantly obliged to return the hemorrhoids, which soon protruded again. In January, 1851, he came with Dr. Laurand to consult the author. A simple examination showed the existence of a large hemorrhoidal tumour, beside which was a smaller one; the epithelium was rubbed off for a certain extent at the point of contact of the tumours; there was, moreover, prolapse of the mucous membrane of the rectum, especially at the base of the more voluminous of the tumours. It was determined to cauterize the latter. The operation was performed on the 1st of February, and on the 10th the hemorrhoid, which was blackish and shrivelled, separated. On the 13th the patient was advised gradually to increase his diet; on the 14th he had a motion for the first time, and from this period he returned to his usual mode of life, resuming the duties of his office on the 16th. The cicatrization progressing slowly, he applied rhatany ointment to the anus twice a day, and was soon completely cured.

On the 13th of April, the author wishing to have a drawing made of the cicatrix left by the separated hemorrhoid, requested the patient to make every effort to bring it into view; but it was filiform and linear, and so difficult to see well on account of the mucous membrane at that side not coming down, that he had to renounce the design. The smaller hemorrhoid, which before was seen externally, scarcely appeared. The bowels acted every day without pain, and the patient was free from all inconvenience.

The author saw this gentleman again about a month before the publication of this essay, and ascertained that the result of the cauterization continued such as has just now been described. The patient's general health was remarkably improved, but he occasionally experienced a feeling of tension towards the extremity of the rectum, which he attributed to his sedentary life; the author advised him to take as much exercise as possible, and carefully to avoid constipation, which would very probably occasion the development of the small tumours which still existed.]

[The fourth was one of *Very voluminous Hemorrhoids, with Prolapse of the mucous membrane of the Rectum; Circular Cauterization of their base with caustic potash and lime; Cure.*—The patient was a Wallachian prince, aged 52, who had been operated on with the ligature for internal hemorrhoids by the author's father in 1836, and returned in May, 1848, labouring under the same affection. Since the former operation, new hemorrhoids had become developed, and produced great inconvenience. Efforts at expulsion showed the existence of two large hemorrhoidal tumours occupying the entire of the anal orifice, with decided prolapse of the mucous membrane of the rectum. One of the tumours was at the right, the other at the left of the anus; numerous hemorrhoidal vessels existed.

On the 6th of May, 1848, an operation was performed by M. Amussat, Sen., which consisted in seizing the right-hand tumour with his T-shaped porte-caustique forceps, so as to include not only the base of the tumour, but also the prolapsed portion of the mucous membrane; the instrument having been firmly placed, and the tissues sufficiently compressed, the round pieces were uncovered by giving a rotatory motion to the protecting plates, and the screw was again

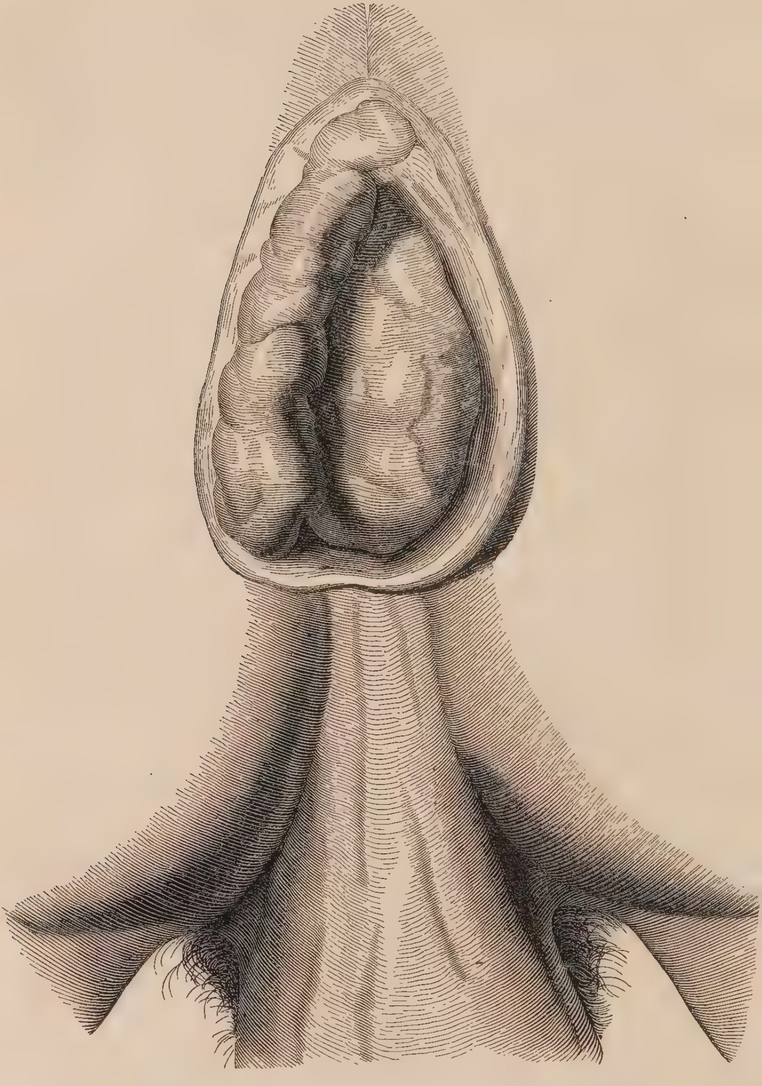

Fig. 7.

This plate represents the anus at the time of the second operation. The hemorrhoid of the right side, which has been cauterized, was as large as that which remains. There was a complete symmetry between the pathological production of the right and left sides. A sufficiently exact idea may consequently be formed of the original state of the affection, and the result of the first operation may be estimated with precision.

tightened, so as to compress the tumour strongly. The operation lasted three minutes. The eschar became detached, and the cicatrix formed so quickly that on the 23rd it was difficult to see it, on account of the retraction which the tissues of the right side of the anus had undergone.

The pathological state of the anal region appearing remarkable, the author obtained permission to have a drawing made of the remaining tumour.

On the 26th, twenty days after the first operation, the circular cauterization of the pedicle of the left hemorrhoidal tumour was performed in the manner just described. The pain was slight, and the patient felt so well the next day that M. Amussat found him in his drawing-room seated on a sofa.

On the 29th an examination of the anus having been made after a motion, neither hemorrhoidal tumour nor prolapse of the mucous membrane could be discovered. The prince soon after left Paris for Wallachia, completely cured.

In the month of August last the author received a most satisfactory account of his patient; his general health was much improved, and he was in the habit of walking about three leagues a day. This exercise, of which he was completely deprived while he had the hemorrhoidal tumours, contributed much to the favourable state of his health, and the author was led to hope that new tumours would not become developed, although the affection under consideration is very common in the country the prince resides in.]

The fifth case is headed *Voluminous internal Hemorrhoids, with Prolapse of the rectal mucous Membrane; Circular Cauterization of the largest with my T-shaped porte-caustique forceps, with the grooves movable on their axes; Cure.*—M. S., aged forty-eight, came to consult me in the end of January, 1851, for an affection which, because her linen was constantly stained with purulent matter, she supposed to be a fistula. On carefully examining the affected parts, I ascertained the existence of two internal ulcerated voluminous hemorrhoidal tumours, with prolapse of the rectal mucous membrane, and some small varicose tumours at the edge of the anus; there was no fistula. The purulent discharge, which had deceived the patient as to the nature of her malady, came from the surfaces of contact of the hemorrhoids, which were superficially ulcerated. On questioning Madame S. as to the history of her case, I learned that, although of a delicate constitution, she enjoyed tolerably good health up to the time when the hemorrhoids had acquired some degree of development. She was the mother of four children, after the birth of each of whom she had hemorrhoids for a time, but then the affection rapidly disappeared, and did not return until the next confinement.

Each time that the hemorrhoids appeared under these circumstances they discharged much. In 1848, when she had been for several years free from them, they came on after much anxiety, and, in spite of the adoption of all ordinary means, they did not disappear;

gradually they even increased in size. In 1849 they began to come down after each motion, and were always accompanied with discharge of blood.

In 1850 the affection advanced still further; the tumours became more painful and much more difficult to return. During the latter six months of that year the patient could not succeed in reducing them, with much pain and trouble, until two or three hours after each evacuation. Her digestion became more disturbed; she had frequent attacks of colic; her strength diminished so much that she was scarcely able to take any part in domestic matters; and she soon became unable to use anything but a little *café au lait* or very light soup. She then decided on consulting me, and on submitting to the operation I proposed to her.

On the 3rd February, 1851, in presence of Dr. Cruveilhier, Surgeon-Major of the 62nd regiment of infantry, I performed the circular cauterization of the more voluminous of the tumours, situated at the right of the anus, with a T-shaped forceps, made after the model of my father's, but with the grooved pieces movable on their axes, admitting of the caustic being covered and prevented acting until the moment it was thought advisable. The operation was performed as I have already described; the cauterized part was well washed with cold water, and smeared with olive oil. The patient took a bath, in which she remained for an hour and a quarter; on coming out of it warm poultices were kept continuously applied to the anal region. The smarting felt after the operation gradually subsided. The cauterized hemorrhoid had, on the 10th, completely disappeared; on the 12th, with the aid of a lavement, the patient had a motion, and passed a little blood. An examination made on the 22nd showed that, in addition to the disappearance of the cauterized tumour, the mucous membrane no longer protruded, and that the second tumour came down in a much less degree.

From this period Madame S. ceased to lose blood, or to have any purulent discharge; her digestion improved; the attacks of colic did not return. She still occasionally felt pains about the anus, but which were nothing in comparison to those she had before suffered. The following is the report of the 6th April, 1853:—The hemorrhoid of the left side comes down less than before the operation, and is no longer ulcerated; the small varicose tumours at the circumference of the anus seem to have increased a little in size; the right side appears as if there had never been either tumour or prolapse of the mucous membrane.

In order to give a still more complete and exact idea of the affection to which I have endeavoured to call the attention of the profession, I have added the annexed drawing, taken from nature, of hemorrhoidal tumours, with prolapse of the mucous membrane of the rectum, on which I shall shortly operate by the process I have described. The patient is in the habit of supporting these tumours with a spring bandage, furnished with a ball of gum elastic. The constant pressure of the ball upon the anus has produced a dilatation of the sphincter, which allows the tumours to come down when

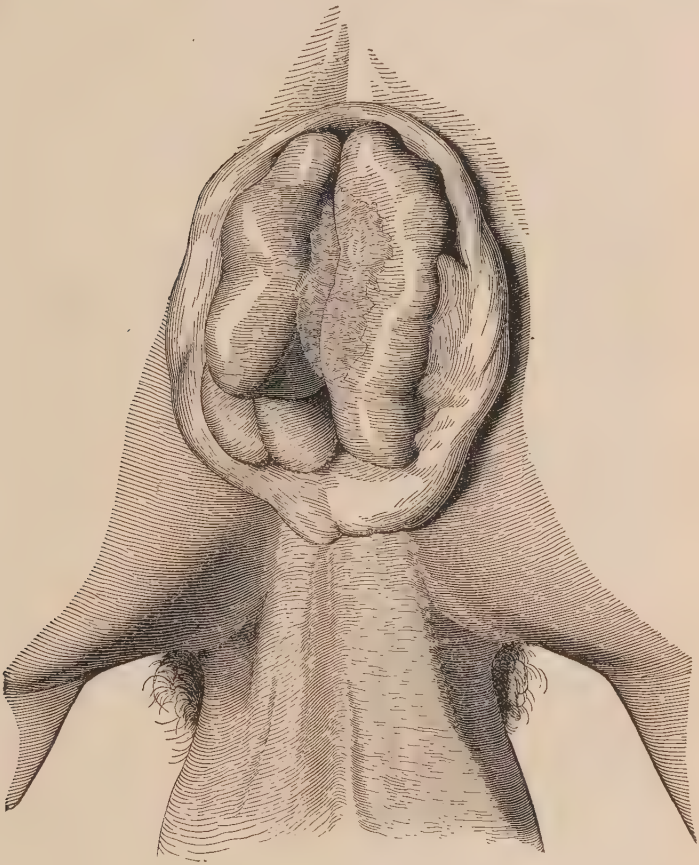

Fig. 8.

they are not supported[a]. I might easily have brought forward a greater number of facts, but those I have recounted will suffice, I

[[a] We have, however, seen many cases of hemorrhoidal tumours, and of prolapse of the mucous membrane of the rectum, in which the greatest benefit has been derived from the support given by an anal truss, manufactured by Mr. Duff, of Molesworth-street, in this city. This instrument consists of a steel spring, well padded and covered with leather, passing round the hips, and furnished in the part which rests on the sacrum with a little cushion. To its centre posteriorly is screwed a steel plate, perforated with three or four holes over one another for the admission of the screw; attached to this plate, by a joint admitting of lateral flexion, is a rod of think, to prove the simplicity and the safety of the operation I have described. I may add, that MM. Hippolyte Larrey, Martin (Saint-Ange), of Paris; Dr. Mascarel, of Châtellerault; MM. Maher, J. Roux, Laurencin, Professors in the Schools of the Imperial Marine, have kindly communicated cases of patients successfully operated on according to my plan. Lastly, MM. Barthélemy and Jobert[a], who formerly gave an exclusive preference to the actual cautery, have now abandoned it, and employ instead the caustic potash with lime. As the details I have given in describing my operation appear to me sufficient to enable the reader fully to understand its

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steel also covered with leather, descending vertically, and terminating in a rounded cone of ebony, and so curved that the latter shall rest against the anus. The length to which this rod descends can be increased or diminished by screwing the plate of steel above mentioned, at one or other of the holes, to the horizontal spring. As an illustration of the effect of this instrument we may mention the case of a medical man, then aged 38, who had for five or six years suffered from a gradually increasing prolapse of the mucous membrane of the rectum, which had in the commencement of 1851 attained such a height that he was unable to walk more than a quarter of a mile without the membrane protruding and becoming painfully strangulated. This was attended with a copious discharge of mucus, which rendered his state uncomfortable in the extreme. Almost every action of the bowels was accompanied by copious hemorrhage. A loss of both red, and what Sir Henry Marsh has so well termed white, blood was thus taking place, which must soon have undermined his health. An eminent surgeon gave his opinion that operation was indispensable. A truss was, however, procured, and, having been properly adjusted, was worn with the effect of wholly preventing the occurrence of the prolapse. As a consequence, the discharge of mucus and the hemorrrhages have altogether ceased, and all annoyance has been entirely removed. The tendency of the use of the instrument is, moreover, by preventing the descent of the parts, to promote their contraction, and thus, if the bowels can be duly regulated without the irritating effects of medicine, to lead to a real cure. It is better to use the instrument only at such times as the patient is likely to be actively engaged. Due attention should of course at the same time be paid to the avoidance of much standing, sitting on hard seats, straining at stool, or lengthened attempts at defecation. We have never seen the dilatation of the sphincter above alluded to produced by the use of this instrument, and we think it will be found that there are few cases of hemorrhoidal tumours, or of prolapse of the rectum, in which the necessity for operation may not be indefinitely postponed by it, and where, under favourable circumstances, even a cure may not eventually be reasonably looked for.—TRANS.]

[a] M. Jobert de Lamballe has recently published a new mode of cauterizing hemorrhoidal tumours *en masse* by means of caustic potash with lime. This surgeon seizes the tumours with a double arch of silver, which forms a sort of capsule, and covers them with Vienna paste, which he leaves applied for some minutes. The only patient on whom this operation has been performed had hemorrhoids of ordinary size, and two successive applications of the paste were necessary to destroy them. This mode of operation cannot be compared with the circular cauterization of the base of the hemorrhoids I have described. By my proceeding, in fact, the caustic is applied on a surface of but very limited extent, and the pressure of the forceps, combined with the continual irrigation with cold water, so moderates the pain of the operation that it is only exceptionally I have recourse to anæsthetic agents. Moreover, the pain which follows the operation is much less than in M. Jobert's proceeding, the cauterized surface being less extensive. His plan can only be compared with the mode I formerly pursued with a stick of Filhos' caustic. The latter proceeding possesses the advantage of not requiring a special instrument, and besides, the solid caustic acting more quickly than the paste, the operation lasts a shorter time, and I have never been obliged to repeat the application.

several stages, and with ease to put them in practice, I shall not return to that part of my subject; but I think it useful to dwell for a little on its sequelæ, and the consequences which may result from it, for the rule of conduct I have adopted is the result of an experience based on the numerous facts I have observed during more than ten years.

The two or three minutes which I judge necessary for the cauterization having elapsed, the forceps is removed, care being taken that the caustic it contains shall not touch the neighbouring parts, and the injection of cold water, which has not been interrupted during the operation, is continued. The jets of liquid should be directed chiefly to the linear depressions formed by the instrument, in which the caustic is situated, in order to remove particles which may not have chemically combined with the tissues. It is at this time especially that the patient feels the cauterization, which is no longer masked by the pressure of the forceps, and the cold fluid pouring on the tissues has, in addition to the effect just mentioned, that of acting as a local anæsthetic. When the parts have been washed sufficiently to have removed all the caustic, the tumours are carefully smeared with olive oil, and returned into the rectum. The oil both serves to facilitate the reduction, and, to a certain degree, protects the tissues by combining chemically with the alkalies, should any still remain.

Small quantities of cold water are also thrown into the rectum, and allay the pain, and afterwards the patient is placed in a cold sitz-bath, or, better, in a full-sized bath at an agreeable temperature, which will, of course, vary according to the time of year. In this he generally remains about an hour, being guided in this respect by his own sensations.

Generally speaking, on coming out of the bath, the pain, which has gradually diminished, is very slight; occasionally, however, in very nervous persons, or when the caustic has not been completely removed from the tissues, it is still severe. In this case we advise the patients to return to bed, and to place themselves in a position similar to that they observed during the operation, while a continued douche of water, which in winter should be tepid, in summer cold, is directed against the anal region. I have known some to find it more convenient to substitute for the douche, continued applications of lint dipped in cold, sometimes even iced water, and very frequently renewed. This latter means, though undoubtedly efficacious, should be employed with care, so as to avoid the reaction which is apt to set in when it is suspended or left off. Other patients remain all day in the sitz-bath, the temperature being kept up by the addition, from time to time, of warm water. I once attended, with my father and Dr. Pouget, a person who, after the cauterization of two tumours, remained in a sitz-bath almost constantly for a week; he said he was very well in it, and not the slightest bad effect resulted from this protracted use of it.

Most frequently two or three sitz-baths during the day, small continued douches, with poultices on the anal region in the intervals, constitute the local treatment.

This plan should be persevered in until the wound is almost completely cicatrized, especially if the least sign of inflammation should be observed.

The only nourishment I allow is strong beef tea, and I recommend the patient to keep his bed for two reasons: first, because by so doing, he bears the restricted diet better; and secondly, because the bowels are then less liable to act. Those who will not submit to this plan are obliged at once to take a more substantial diet, the result of which is stools, which are more painful in proportion as they occur nearer the time of the separation of the eschar.

Frequently a dysuria comes on which lasts some hours, and subsides spontaneously, for I do not remember having had recourse to catheterism in a single instance. There is generally swelling, sometimes partial, sometimes general, of the areolar tissue about the anus. The patients complain of it a little, and generally think it is the hemorrhoids which have come down. I employ only the local means I have mentioned, and if the patients are very irritable, I have the poultices sprinkled with a little oil and laudanum. I sometimes give on the first night a composing draught with syrup of poppies. The state of the patients is generally so satisfactory on the following days, that they complain only of the diet and rest which are imposed upon them.

At the end of three, four, six, eight, or twelve days, portions of sloughs will be seen on the poultices, indicating that the mortified tumours are thrown off, of which the characteristic odour they diffuse likewise gives notice. The broth diet is continued as long as the patient does not complain too much of it, and in this way the work of elimination and reparation goes on very well, as there is nothing to interfere with it. I endeavour to postpone the first motion as long as possible, without, however, annoying the patient too much. When he feels a repeated desire to go to stool, which generally occurs at the end of six or eight days, I direct two or three ounces of lard melted in a water-bath, or a lavement of decoction of marsh-mallow, to be thrown into the rectum. The introduction of the tube should be managed with the greatest care, so as not to irritate or injure the wound. This duty should be intrusted to an assistant or an intelligent nurse.

The first stool is always rather painful, and the patient passes a few drops of blood; in two of my patients two or three ounces were lost without any bad effect except some increase of weakness, which I met by improving the diet. If the exclusive use of beef tea does not become too repugnant to the patient, which generally takes place, I induce him to continue it for some days, being guided by the time at which the eschars fall off and the probable state of the suppurating surface, the extremity of which can generally be seen at the anal orifice. It is unnecessary to observe, that I discontinue the baths as soon as the pain about the anus has ceased, as they would, along with the restricted diet, lower the patient too much. My object in continuing the exclusive use of the broth is to postpone the second motion, and to render it as small as possible. If, however, this diet does not sufficiently support the strength, or if disgust comes on, I substitute fresh eggs, gravy, and a little bread or pastry, gradually increasing their quantity. The second stool usually takes place from the twelfth to the fifteenth day, and ought to be preceded by the precautions I have detailed in reference to the first. The patient now begins to resume his ordinary mode of life, a great many go out, and some return to their occupations, taking care, however, to use an occasional sitz-bath, to foment the anus with tepid water several times a day, and particularly after having been at stool.

Such are the phenomena I have observed, and the measures I advise, after the circular cauterization of the base of hemorrhoidal tumours, whether simple, or complicated with prolapse of the neighbouring rectal mucous membrane; and from what I have stated it will easily be inferred that not only have I never lost a patient in consequence of the operation, but I have never had reason to be uneasy about my patients. I may add, that in no case have I observed the slightest symptom of pyemia to arise.

It would, perhaps, now be well to compare this new mode of treatment with those in ordinary use—the ligature and excision: but to draw this parallel would lead me beyond the limits of the present essay; it may suffice to remark, that I have never observed the nervous or phlebitic attacks to result from the new plan which have been attributed to the ligature, nor have I ever witnessed the hemorrhages and purulent absorptions to which excision occasionally gives rise. In a future essay I shall examine, comparatively, the other modes of cauterization employed in the treatment of hemorrhoidal affections.

It will, no doubt, have been remarked, that the five cases I have quoted are those of patients advanced in life; the remaining facts which have come under my observation confirm the opinion generally received in reference to this affection, namely, that it is more common in those who have passed forty years than in younger persons. It may be fairly asked if it is advisable to cauterize hemorrhoidal tumours in old people, and especially when, being of long standing, they have become habitual and constitutional. As I have already said, I never take away all the tumours, confining the operation to those which give most annoyance; and although it has been objected that in acting thus we do not completely remove the affection, and that the tumours which are left may subsequently be developed, and oblige the patient to undergo the operation anew, still, as this reproduction has hitherto been very rare, and as my plan has always been attended with fortunate results, I think it right to persevere in the same line of conduct. In a word, I am of opinion that we ought only to remove the tumours which are really prejudicial to health.

Among the advantages which result from the operation I shall point out, first, the cessation of that constant and great irritation caused by the protrusion and perpetual friction of the tumours against one another. This friction quickly removes the epithelium from the surfaces which are in contact; the patients feel an incessant smarting, which enervates them; a weakening, muco-purulent discharge is set up at a period of life when losses suffered by the system are repaired but slowly and with difficulty. Moreover, the sufferers are debarred from the little exercise their lower limbs would still allow them, by the fear of its producing an aggravation of their state. It is rarely, too, that the phenomena of digestion are not more or less disturbed; the advantages to be derived from terminating such a state of things will be at once apparent.

Double care should, however, be taken after the operation to guard against metastatic engorgement of the organs of respiration or of the liver; of such the physician should be particularly watchful, especially at first. I may add, that spring should, if possible, be chosen for the performance of these operations, so as to have the fine season for the period of transition.

It was my original intention to have closed my essay here, having, I think, sufficiently demonstrated the proposition I had advanced; but on reviewing the various cases of voluminous and complicated hemorrhoidal tumours I had observed, and reflecting on the comparisons which might be established between the affection I have been speaking of and prolapse of the mucous membrane of the rectum, whether simple or complicated with hemorrhoidal tumours, that is to say, on the cases in which the complication becomes, by its development, the principal affection, as well as on the difficulties which sometimes exist in clearly diagnosing between these two pathological states; I asked myself if an operation which succeeds so completely in one case might not be applicable to the other. The study of the etiology and ordinary progress of prolapse of the mucous membrane of the rectum shows that, most frequently commencing as a complication of the hemorrhoidal affection, it may at length become the prominent ailment in consequence of its development and of the derangements it produces; and it is often true that while the vascular element little exceeds its ordinary limits, the prolapse alone attracts the entire attention of the surgeon.

Is not, in both cases, cauterization with a porte-caustique forceps applicable to the mucous tumour protruding from the anus, and may it not be regarded as the logical corollary of the treatment we employ in the cure of hemorrhoids?

Ligature, excision, and cauterization have been already employed in the treatment of prolapse of the mucous membrane of the rectum. As in hemorrhoids, ligature has given rise to fatal nervous symptoms, excision to severe hemorrhages; accordingly, these two methods appear to have been abandoned in both cases.

The actual cautery employed by the ancients, especially advocated by Marcus Aurelius Severinus, and described by Sabatier, who proposed to trace burnt lines upon the tumour, by means of an iron wire brought to a white heat, has been successfully practised by Dr. Kluiskens of Ghent, and by several French surgeons.

It appears to me, however, that this process, which I believe to be preferable to the former two, may with advantage be replaced by the use of caustics.

We find in the records of science instances of complete gangrene of the prolapsed part, caused by strangulation produced by the sphincter, with cure. It would, therefore, at once occur to us to seize the base of the prolapse with a strong porte-caustique forceps, so as to induce immediate mortification, as in the case of hemorrhoids, in imitation of what is sometimes done by nature. By acting thus we should probably do more than is necessary, and expose ourselves to the risk of causing a subsequent contraction of the anal orifice.

I think it would be sufficient and preferable, in such a case, to follow the plan I adopt with voluminous hemorrhoidal tumours, namely, to destroy, by the same process of cauterization, the half or two-thirds of the mucous tumour, so as not to have a continuous linear cicatrix.

Such were the deductions I thought might strictly be drawn from the facts I have quoted, when, on the 25th of last August, M.X., a physician in the environs of Blois, who was acquainted with the former part of this essay, came to consult me about his wife, whose case I subjoin, and who was affected with a prolapse of the mucous membrane of the rectum. This very interesting case gives to the proposition I have announced the sanction of an experience recent indeed, but which I hope to establish in a positive manner when time and facts shall have enabled me to make in it such modifications as may hereafter appear to be necessary.

[The case alluded to was one of voluminous prolapse of the mucous membrane of the lower extremity of the rectum, treated by cauterizing the two lateral portions of the tumour with a T-shaped forceps armed with Filhos' caustic; and resulting in cure. The patient, Madame X., aged 63, had always suffered from obstinate constipation; in her youth she was often, when she had not recourse to lavements, ten, twelve, and sometimes fifteen days without a motion. She had also long and alarming fainting fits at the times when the bowels felt as if about to act, and she made violent and prolonged efforts to expel the fæcal matters.

At the age of 54 the patient perceived that the mucous membrane of the rectum protruded externally, but this was not constant, taking place only at intervals of two, three, or four months, and continuing for not more than three or four days at a time. It was preceded by a feeling of general uneasiness, headach, and a sensation of weight and heat in the rectum, and was followed by a tolerably abundant hemorrhage at stool, when all returned to its normal state.

Two years later, without the hemorrhage being more frequent, the prolapse, from having been intermittent, became constant when the patient was up, and exhibited itself from the beginning under the form of four non-pediculated tumours, one superior, one inferior

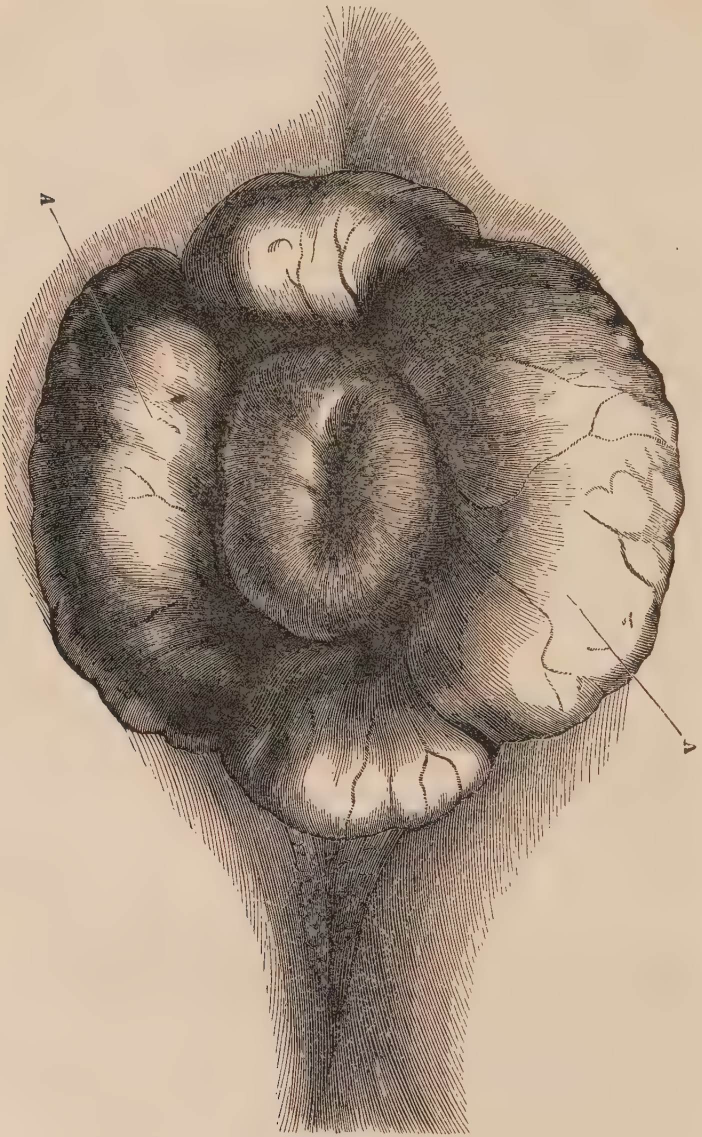

Fig. 9.

or perineal, and two lateral; the superior and inferior being smaller than the two lateral ones. This prolapse became in time more voluminous and more inconvenient, in consequence of the feeling of weight and dragging it occasioned in the uterus and its appendages. The patient, being no longer able to walk a step without putting her hand behind to raise the tumour, except during some hours after rising when she had the evening before taken lavements, decided on submitting to a surgical operation.]

The accompanying drawing, taken a little before the operation, gives an accurate idea of her malady. It will be seen that there existed an undefined, unfurrowed, rosaceous, mucous tumour as in the hemorrhoidal affection, rendering it impossible for any one to be for a moment deceived as to the nature of the ailment.

A lavement having been administered, and efforts at defecation having been made, an examination was instituted. On exploring the vagina with the index finger, I ascertained that the cervix uteri was united posteriorly by a cicatrix such as my father obtains by cauterization in cases of retroversion and retroflexion. Bearing in mind the analogy existing between this affection and that which is the subject of this essay, I proposed to cauterize a portion of the mucous tumour, as if we had to do with voluminous hemorrhoidal swellings. To this M. X. agreed.

On the 29th August, Madame X. having in succession taken and passed two lavements, using as violent efforts as possible, was placed on a bed furnished with a folded sheet and oilcloth, and in the position usually adopted in operating for hemorrhoids.

The anus then presented the appearance represented in the figure; considering the lateral portions A A as two large hemorrhoidal tumours, I seized each at its base with a strong T-shaped porte-caustique forceps with protecting plates, and when I had placed the instruments as high as possible, I uncovered the caustic, and strongly tightened the two screws. But as the fissures between the four portions of the tumour were very shallow, I was obliged to add to one of the extremities of each forceps a forceps with porte-caustique rods, charged with paste of potash with lime, so as to make artificially furrows which did not already exist.

Everything having been thus arranged, I caused a current of iced water to be thrown on the anal region with two large Eguisier's irrigators, during the ten minutes that the instruments remained applied. Under the influence of the very strong pressure exercised by the forceps, and of the current of iced water, the patient, a very nervous person, bore the operation so well, that she did not require the use of chloroform, which we had before agreed to exhibit.

The operation being over, I removed successively the small forceps, then the T-shaped forceps, and continued the douches of iced water for about a quarter of an hour, taking care to direct the jet on the points where the caustic had touched.

Having smeared the entire mucous surface with olive oil, I returned it by means of a regular taxis, and the patient was placed in a cool sitz-bath, a compress of linen having been fixed on the anal region so as to prevent the protusion of the mucous tumour. The pain she had experienced after the operation was allayed, and soon became very tolerable. In the evening there was a little fever and complete retention of urine, which rendered catheterism necessary. The retention continued until the 2nd of September, when it ceased. On the 1st of September the patient voided per anum a blackish liquid; this kind of discharge continued for some days. On the 6th, a long portion of mortified areolar tissue was passed. On the 30th, a month after the operation, an examination was made; nothing was visible externally, and it was stated that no protrusion took place at stool. On the following day the patient returned to the country.

Since that time Madame X. has often had motions with scarcely any suffering; but being always constipated, she has frequently passed hard matters covered at first with a little blood, then with purulent matter; moreover, she takes walking exercise without the occurrence of the slightest prolapse.

It will be observed, in perusing the foregoing statement, that I followed in this case, both in the operation and in the subsequent treatment, precisely the method I have laid down for the cure of hemorrhoidal tumours, namely, the cauterization of a portion of the mucous mass with forceps furnished with grooves filled with a caustic paste, and afterwards a strict diet, with the view of avoiding motions, particularly after the operation; accordingly, the consequences have been as simple and as favourable as in the affection I have just mentioned.

Prolapse might, no doubt, be treated with direct cauterization by means of a stick of Filhos' caustic; but this proceeding, though more simple, and not requiring a special instrument, would be more painful for want of the compression, and the continued injection of cold water.

Hitherto the result of the operation has been as satisfactory as could be wished, and it will continue so, if I may judge by the results we have obtained in the treatment of the largest hemorrhoidal tumours.

To recapitulate from the foregoing, I think we may conclude:—

1. That the circular cauterization, such as I have described, enables us to cure hemorrhoidal tumours, and the prolapse of the rectal mucous membrane which accompanies them.

2. That this operation has always been, in my hands, perfectly harmless in its immediate consequences.

3. That the health of hemorrhoidal patients operated on after my mode has eventually improved, contrary to the generally received opinion.

4. That by circular cauterization we may also obtain the cure of prolapse of the mucous membrane of the rectum.—*Bulletin de Thérapeutique*, vols. 44 and 45.

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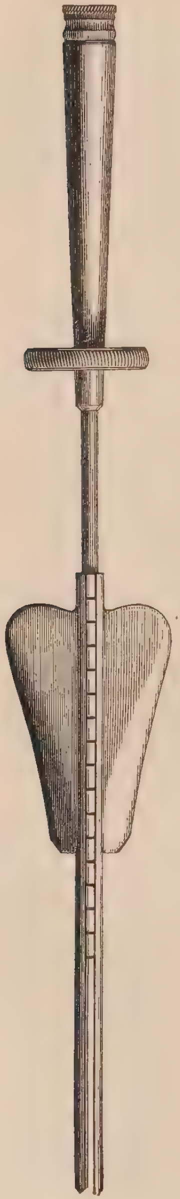
PART I.

ORIGINAL COMMUNICATIONS.

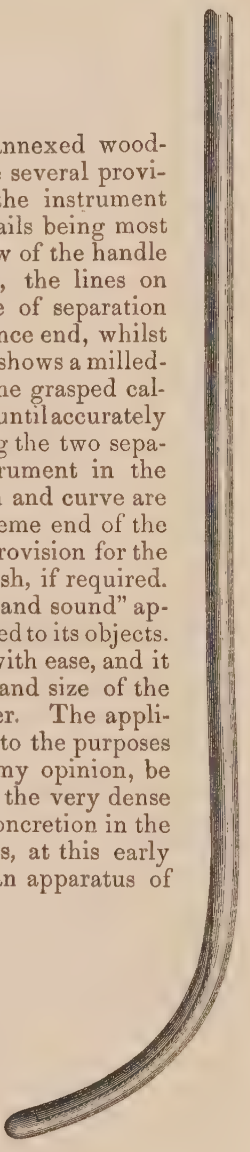
Art. XI.—*On a Calculus Meter and Sound for the Child.* By Christopher Fleming, M. D., M. R. I. A., Corresponding Foreign Member of the Surgical Society of Paris; Member of the Court of Examiners in the Royal College of Surgeons in Ireland; Surgeon to the Richmond and Netterville Hospitals, &c. &c.

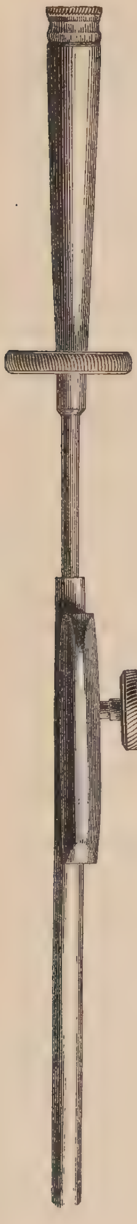
In the twelfth Number of the present series of the Dublin Hospital Gazette, I made some remarks on the subject of lithotomy, in connexion with cases which had recently occurred under my care; and I particularly alluded to the value likely to arise from the capability of estimating the size of a calculus in the bladder of the child, previous to the performance of such operation. I now take the opportunity of submitting the outline of an instrument constructed for that purpose by Messrs. Thompson and O'Neill, of Henry-street, in this city, cutlers. The instrument is on the principle of Mr. L'Estrange's, being modified for the objects in view. Its length is thirteen inches; its size between the numbers 5 and 6 on the ordinary catheter scale; and its curve that which I find to answer excellently well for catheter or for sound in childhood.



On referring to the annexed woodcuts by Mr. Oldham, the several provisions contemplated in the instrument will be manifest, the details being most accurate. The front view of the handle portion exhibits a scale, the lines on which mark the distance of separation of the blades at the entrance end, whilst the side view of the same shows a milled-headed screw whereby the grasped calculus is secured and fixed until accurately measured; and by joining the two separate halves of the instrument in the drawings its exact length and curve are ascertained; at the extreme end of the handle portion is also a provision for the sounding-board or tun-dish, if required.

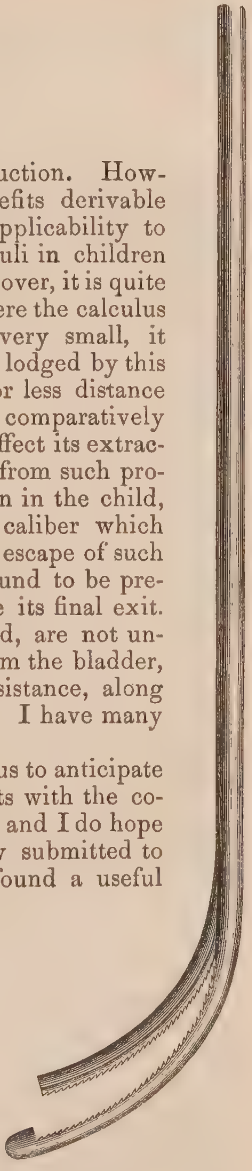
The "calculus meter and sound" appears to me to be well suited to its objects. It traverses the urethra with ease, and it ascertains the presence and size of the calculus, if in the bladder. The application of the instrument to the purposes of lithotrity would, in my opinion, be more than hazardous, as the very dense nature of the calculous concretion in the vast majority of instances, at this early period of life, demands an apparatus of





much more solid construction. However, the practical benefits derivable even from its limited applicability to the measurement of calculi in children are unmistakable. Moreover, it is quite obvious that in a case where the calculus was ascertained to be very small, it might, when grasped, be lodged by this instrument to a greater or less distance in the urethra, when a comparatively simple operation would effect its extraction. Nay, more, apart from such procedure, the urethra, even in the child, might be dilated to a caliber which would admit the partial escape of such class of calculus when found to be present, and, perhaps, insure its final exit. Very large calculi, indeed, are not unfrequently discharged from the bladder, without any surgical assistance, along the tract of the urethra. I have many such in my possession.

It is not too much thus to anticipate equally satisfactory results with the cooperation of the surgeon, and I do hope that the instrument now submitted to the profession will be found a useful auxiliary.



Art. XII.—"*Unsoundness of Mind,*" *in its Medical and Legal Considerations.* By Joseph W. Williams, L. R. C. S. I., Licentiate of the King and Queen's College of Physicians, &c.

(*Continued from* page 54.)

MONOMANIA.

Justice demands that the grounds on which insanity be received as a plea for exculpation from punishment, or as a pretext for exclusion from social rights, should be as uniform as possible. We admit the difficulty of defining insanity: and yet to recognise an insane person is a matter that we are satisfied the majority of mankind believe themselves fully competent to. We shall not attempt the former, but rather essay to offer a few suggestions which may at least tend to more fully demonstrate, and thereby, it is not impossible, diminish the obscurity of the latter.

It unhappily requires but little observation to perceive that crime and insanity have many features in common. The records of the one may be regarded as furnishing the most marked examples of the other. It is, in many instances, no light undertaking to draw the line of demarcation,—to say what distinguishes iniquity from folly,—although the illegal acts of the insane are ever far removed from that criminality with which they may appear as identical. We have already repudiated the supposition that similar manifestations must of necessity indicate uniformity of causation, and have therefore affirmed that eclecticism is the only safeguard in psychological medicine. This will be fully exemplified in the study of the cases to be subsequently detailed.

We may for the convenience of description state, that most, if not all, insane criminal acts are capable of being ranged under one of the following divisions:—

I. Crimes against the state; II. Crimes against the person; III. Crimes against property.

The mental conditions which originate such acts are also reducible to a similar number of divisions:—

I. Insane states manifested chiefly by delusion, or what has been termed "monomaniacal insanity," in which the intellectual or reasoning powers seem to be those more particularly involved.

II. Insane states in which the exaggeration or perversion of the moral intelligence or affective faculty is that most evident, constituting the "moral mania" of writers, when the intellectual powers are apparently unaffected.

III. Insane states in which neither the moral nor intellectual faculty is of necessity inadequate to appreciate the relations of a particular act, whose commission is alone explicable on the admission of an irresistible impulse: a form of disease described as "impulsive insanity."

In proposing such a division we seek not to establish any connexion between a special form of crime and a particular insane condition, since it will be evident that the criminal acts capable of being ranged under one of these three divisions, or embracing the whole three, may find their plea of extenuation in either of the insane conditions.

We proceed first to the consideration of Monomaniacal Insanity.

Monomania may be defined as a morbid mental condition induced by an habitual recurrence of similar thoughts. In this disease the mind, as Reil well expresses it, "suffers a paralysis of its powers of conception," and is thereby rendered inadequate to appreciate the general or special relations of some particular point round which those thoughts, as it were, revolve. The causes conducing to this form of disease, though endless in their variety, present a certain uniformity in their results. It matters not whether the thoughts those causes engender be of a religious, political, or scientific nature, whether they have reference to the past, the present, or the future,—the essential characteristic of the affection by them established is still preserved. *The mind becomes morbidly impressed with certain suppositions, and is as a consequence rendered incapable of the healthy estimate of those relations to which such suppositions refer.*

The study of monomania offers for our consideration many of the most anomalous problems in psychology, since individuals whose minds are, on some one point, thoroughly deranged, may, as regards other matters, not only display extraordinary energy and acuteness, but also, while admitting the peculiarity, defend their abnormal suppositions, with arguments requiring for their exercise considerable logical acumen. Fully competent to detect, they may even ridicule absurdities and peculiarities in others, which are trivial in comparison with those habitual to themselves. In the physical constitution of men a certain uniformity of structure is visible, any departure from which is immediately appreciable. Corporeal actions being regulated by recognised vital laws, the criterion of physical health may be stated to rest in the harmonious adaptation of the one to the other; when this becomes interrupted, proportionate to the importance in the economy of the function impaired, is the disturbance which ensues. In the mental constitution the same facility of recognising abnormal conditions by no means exists, since the standard of mental health cannot be equally well defined. Abstractedly considered, the evidences of mental disease in one person may be identical with the healthy and ordinary exercises of another: it is therefore a matter of serious importance, when cases arise in which the existence of insanity is based on arguments explicable by the dictates of reason, that society be preserved from the danger which might result from the too easy reception of such a plea; while, at the same time, humanity be exculpated from responsibility for those sad operations of disease which, it is possible, may eventuate in the natural disposition to crime being more prominently, because morbidly, developed. In obscure physical disease, the keystone of our diagnosis is the history of the case: yet, with all the evidences and aids which modern medicine can bring to bear for its elucidation, how often must caution regulate our opinions, while prudence temporizes our treatment! In mental disease, and in this particular form above all others, unusual difficulties demand increased care for their exposition. In many judicio-psychological questions the physician must, as Kant observes, call the philosopher to his aid, since not only does it behove him to estimate the psycho-ethical relations of certain mental manifestations, but also to determine the relation of those manifestations to the personality. What does this require? Not a hasty visit,—not the mere listening to a simple recital of apparently anomalous facts,—not such a melancholy display as has been witnessed on some trials, where medical men without experience in insanity, and with but imperfect opportunities for observation of the case under adjudication, have volunteered their evidence:—but, that deliberate investigation indicating anxious experience, which scrutinizes the individual character, the progress, order, and combination of symptoms, their relation to the psychical and physical constitution, and gives as the result of their conjoined evidence a definite and matured judgment. Certainty in knowledge is not permitted to man: the most we can, therefore, hope to accomplish is, to limit our fallibility within narrow bounds. In psychical as in physical disease this is sufficiently evident; since, while freely admitting that every concession to crime must be regarded as an injustice to virtue, yet cases will occasionally arise in which the conflicting evidence adduced renders it a merit to doubt, though the humane spirit of our legislation affords to the individual accused of the most flagrant crime the benefit of that doubt. We have observed that the standard of mental cannot be equally well defined as the standard of physical health. There are many facts which strengthen us in this opinion: they rest on our ordinary observation of life. Coleridge truly wrote: "Society would be broken up, and man would loathe his brother man, if the secrets of each heart were laid open to public gaze." This affirmation must be conceded; for, as we write not to depict the follies of the day, and are not of those who consider a knowledge of human nature to signify an acquaintance with the mere vices of mankind,—though it is true that such information is essential for a just estimate of humanity,—we shall not pause to give extracts from a book each one may read for themselves; yet we may observe that on the analysis of the heterogeneous mass of which society is composed, we cease to be surprised that many are found content to acquiesce in the sentiments of others, rather than to reason for themselves; to manifest a sensibility for trivial faults, an incapacity for great merits; to show in their estimate of one class of offences temerity and fastidiousness, which contrast strangely with their appreciation of another;—to exaggerate the importance of knowledge scarcely available; and to undervalue, if not deny, the existence of those peculiarities which proclaim their own inconsistency.

The complex nature of the question we are investigating renders it essential that we fully appreciate the various sources from which the elements of a just opinion are derivable. These we conceive may be enumerated as follows:—

I. Our study of the general and special relations of the individual affected.

II. Our analysis of his mental and moral constitution in their mutual reactions.

III. The relation of the monomaniacal conception to the foregoing.

Society has imposed certain observances and rules to regulate and direct the association of its members. The necessity for such will be at once apparent when we consider that want of uniformity in the intellectual and moral constitution of man which is on all sides visible. The bases of these regulations may be regarded as resting equally on the ethical as well as the psychical perceptions of men,—their object being the social assimilation of one to the other; their end, the establishment of order and preservation of good will. Public opinion, that is, the aggregate expression of individual sentiment, has therefore at all times been a legitimate object of honourable ambition. Its disregard indicates a desire to establish an independent standard of excellence, which seldom fails to bring its moral penalty in the forfeiture of that confidence essential for the enjoyment of the proper mind. We do not by this mean to imply that men are to pander to the follies, acquiesce in the weakness, or comply with the absurdities, fashion may require,—far from it. These are too often but the gaudy toys with which conventionality seeks to divert the judgment of sober reason. But we have little hesitation in declaring that those obligations of society which good sense has dictated, and experience approved, as promoting individual comfort by maintaining among its members mutual respect, through a reciprocal accordance to certain observances, cannot be altogether despised, without leading us to question the stability of the intellect, as well as the purity of the morals, of those who have the hardihood to act in such a manner.

Society demands conformity to her established rules, and is, as we have mentioned, jealous of each innovation in her code. Not but alterations are being continually introduced,—fashions changing with the season, manners with the age. All this, however, is in accordance with the wise rule of Providence, and part of the great plan of the Creator, who has declared in each operation of nature, that " to every thing there is a season." The universal judgment of men recognises in the compliance with those usages they may have approved, a definite and known state of mind, respecting which they are adequate to form an opinion, and accordingly presume on their capability of appreciating the relation the same state of mind should have to circumstances they are not so competent to estimate. That is to say, from the coincidence of action in one particular position we identify the *animus* of another with our own, and are, therefore, apt to refer their several actions to the test of our individual consciousness; and, being satisfied that under similar circumstances the performance of a particular act would be entirely contrary to our feelings or disposition,—we cannot, therefore, account for their occurrence on any reasonable principle, and seek to explain the difficulty by assuming derangement of either the moral or intellectual faculty.

Sir William Ellis observes: " In a state of sanity the various feelings and propensities are kept under control, partly by their mutual influence upon each other, partly from moral causes, and partly from the restraints imposed by society. When careful education and religious feeling have rendered their due regulation habitual, strong propensities may exist unknown and unsuspected except by the individual." This preservative influence of society is exercised in many ways, not the least important of which being the habit of self-control it engenders. "Habit," it has been well observed, "is second nature." Dugald Stewart, in reference to custom, writes: "It is one of those natural instincts which no reasoning or process of thought is able to either produce or to prevent." Habitual self-control affords, next to religion, the surest guarantee for mental and moral health, since temptations successfully resisted in the end become powerless, while vice with each succeeding indulgence acquires additional force, till at length the "still small voice" of conscience ceases altogether to be heard.

Our physiological observation of men has established a fact of importance to be remembered,—that certain psycho-physical differences appertain to some individuals, which enable them to apprehend the exterior world in a manner peculiar to themselves alone, and to react on it. It would be easy to enumerate examples of special constitutional peculiarities or idiosyncracies in many, which not only coexist with the enjoyment of sound health, but whose very interruption indicates the presence of disease. Observation proves an analogous condition to as frequently exist in the psychical constitution, when it becomes a matter of the very greatest importance to distinguish these peculiarities and idiosyncracies of thought and feeling which specially appertain to particular individuals, from similar conditions of thought and feeling which may in others be most valuable as denoting the presence of disease. It needs but little ability to recognise that which, for want of a better name, we term *Eccentricity*. A single interview is often sufficient to establish the opinion that much individual peculiarity exists; it would, however, be shallow philosophy and dangerous practice to regard such as indicative of unsoundness of mind. We do not believe that any experienced physician would do so, since it is the continued observation of successive phenomena in the same individual which enables us to arrive at their true appreciation. A particular act, or succession of acts, to acquire value as a symptom of insanity, must do so through the fact of its denoting a departure from the natural and healthy character, temper, or habits. It is not, therefore, sufficient that the medical man who would determine the question of soundness or unsoundness of mind be informed of special acts which he contrasts with what he may regard as an approved standard of mental health, but it is requisite that his standard be, the admitted mental health of the individual, that the acts specified may have their value determined accordingly; since, to quote the words of Dr. Combe, "it is the prolonged departure, without adequate external cause, from the state of feeling and modes of thinking usual to the individual in health, that is the true feature of disorder in mind." Ordinary observation is sufficient to confirm that it is the relative appreciation of an act which determines its value. What is our test of sanity? Are we of the school of Chrysippus, " who deem every man mad whom vicious folly or the ignorance of any truth drives blindly forward"? Is the departure from a fixed rule, or the acquiescence in established usages, one way or another to determine our opinion? It cannot be denied that in all countries where intellectual activity has been awakened, one of the most powerful agents in the wise direction of human events is the tendency of original thought to differ from general opinion, when, living, as it were, in advance of their age, master minds have disregarded those narrow bounds within which Routinism would restrain the most splendid genius. Universally it will be found that the greatest triumphs of the human mind have been accomplished in direct opposition to the current of general opinion, and that public thought in one age is not unfrequently but the echo of solitary meditation in that which had preceded it. The doubt as to what may be accomplished, and the detail of what has been effected, place the same question in a very different light. How many men have foreshadowed truth while propagating errors which enveloped the most profound discoveries of their succeeding age?

On most criminal trials many simple logical or ethical propositions are put forward, and the jury thus become, as it were, personally identified with the replies of the medical witness, whose value they estimate according as they may correspond with, or differ from, their several sentiments; whereas the matter to be determined is not:—Does the presence or absence of particular manifestations indicate the soundness or unsoundness of the mind or morals of all or of most men? but, How far the presence of these special manifestations indicate the mental or moral condition of the particular man? If we admit the general application of such a question, we should premise a certain and fixed standard of sanity, and an inquiry would arise respecting the mental soundness of any two men entertaining opinions diametrically opposed. The more limited application of the proposition leads to the special examination of each case, when, as in our diagnosis of physical disease, the application of general principles by no means implies the adoption of a general rule. Had we but a moral intelligence, no doubt respecting our opinion could arise, for our moral standard is fixed, and does not, therefore, admit of being disputed. Every vicious man should then be regarded as insane, for he was thus acting against the first law of nature in consummating his eternal destruction, the difference between right and wrong admitting under such circumstances of no dispute. Insanity and vice should be identical—that is, supposing that, in the absence of a reasoning process, either was possible—which we by no means admit, inasmuch as our movements, wanting the elective power of the intelligence, would be purely instinctive. The compound nature of our mental organism, however, disarranges this simplicity. The moral is at fault—the intellectual extenuates; the intellectual errs—the moral puts forward some excuse; so that men, at length, in self-defence, are required to adjudicate on the excesses or deficiencies of either intelligence, as vice or insanity. The safety of society demands that a difference be maintained between crime and insanity, and the safety of the individual requires, that the relation between any particular crime and his state of mind be, if possible, established. Insanity may be stated to be a diseased condition in which the mental harmony is disturbed, and the intelligence as a whole is willing, but unable, to appreciate that which is right. Crime, on the other hand, may be regarded as the evidence of, so far, an analogous condition, for the mental co-operation is perverted, though maintained. On what does the will of man depend? Is it not the ultimate decision which the moral and intellectual faculties conjointly determine? Lord Hale was not wholly wrong when he declared "all crime to be the result of a partial insanity;" for, if the will be the product of mental operations, and those mental operations be opposed to the rule of right, which the intelligence has acknowledged, that mind cannot be regarded as a sound mind, since it imperfectly, or improperly, arrives at a decision. We are thus brought to the question—Where does the ability to determine on a particular act cease or commence? For, accordingly, must be the responsibility or irresponsibility of the offender. Experience and observation prove, that this mental regulation is, to a certain extent, under a man's own control; it therefore follows, that those illegal acts resulting from unsoundness of mind within the individual regulation of the will, are justly regarded as crimes,—while similar acts originating from mental conditions, in which the will has no part, cannot be esteemed as other than so many evidences of insanity. "No one," writes Dr. Duncan, "I presume, will dispute that every man who commits a crime, or indulges in vicious habits, acts *as if* he were mad, that is, he does not duly and correctly compare and weigh the consequences of his present actions, for if he did, he would undoubtedly abandon them. But then the difference between the two cases is this, that while the man in full possession of his faculties shuts his eyes to results that he does not choose to see, the poor lunatic, being blinded by his infirmity, is incapable of looking in that particular direction, and is, consequently, not acting against the impulses of his natural judgment." Consequent on the want of uniformity in the psychical and ethical perceptions of men, it follows that in many instances so much of crime as belongs to insanity is unnoticed, and so much of insanity as accompanies crime is undetected, until from some overt act an inquiry is instituted into their connexion. The identification of crime with such unsoundness of mind as this we have alluded to, is one thing; the identification of crime with insanity, in its general acceptation, is altogether another: by confounding the two, much injury to man and injustice to society must result, for the lunatic might be thus punished as the criminal, and the criminal escape free.

The question comes to be discussed, what are those criteria by which may be determined the distinction between that unsoundness of mind where man ceases to be a free agent, and that in which responsibility is maintained. Knowing the difference of original mental constitution, circumstances, habits, education, and other modifying causes, which conspire to produce a diversity of character and disposition in each, we believe that much of the doubt and difficulty in forming or receiving opinions has arisen from futile attempts to generalize on this particular point, in which it has been assumed, that what is true of one must be true of each, or that which is true of many must be true of one. The more we reflect on this subject, the more fully we become strengthened in our belief, that it is *impossible to propound a general rule.* We fully agree with Dr. Winslow, "that no single fact, nor any accumulation of facts, for each of which a possible, though inadequate, reason may be assigned, is *per se* conclusive of irrationality." Our further observations shall more fully establish the truth of this, and also place beyond doubt the danger of being guided by the opinion of those who, judging from the mere concurrence of events, because there may be a coincidence of those phenomena which denote health, therefore presume that disease cannot be present. As we proceed in our psychical analysis, and become conscious of the moral and intellectual differences observable in men similarly circumstanced, exposed to the same temptations, and having equal means for the gratification of their wishes, the conclusion will force itself on the mind—despite of all that Locke and others have written to the contrary—that, in the words of the author last quoted, "there are certain intuitive principles appertaining to each individual, which, independent of education, give a natural bias, and sometimes a premature development to certain faculties." Therefore it is that we conceive our estimate of an individual character is the balance by which the value of symptoms presumed as indicative of unsoundness of mind must be determined.

The most limited experience cannot fail to supply many examples, to which the ordinary criteria of sanity can scarce be said to apply. Habits of deep thought, and of abstruse research, in many minds, more fully develop individual peculiarities, which demark certain men from their fellows; such individuals may, it is possible, transgress, or rather neglect, many of those conventionalities society requires, and revel in the luxury of their peculiarities. Their moral exculpation is, notwithstanding, generally conceded, while their eccentricity is excused for the sake of that genius it envelops. When the moral intelligence becomes similarly involved, the offender is, however, placed in a far different position. Abstraction of mind must be distinguished from abandonment of principle; thoughts preoccupied be regarded as distinct from morals depraved; lest actions which are odd, but innocent, be confounded with conduct outrageous and evil. In pursuing our psychological study of the general and special relations of the individual presumed as being mentally affected, it becomes, therefore, of vital importance that we draw the diagnosis between an inability and an indifference for perception,—an originally defective mental constitution, and that which succeeds to vicious indulgence,—a deficient conception of moral responsibility, and a wilful abandonment of moral rule. The experienced physician, if opportunity be afforded—and without this we doubt not he will be silent—may generally succeed in truly estimating those peculiarities which distinguish eccentricity from insanity, since the one must be regarded as the result of a sound judgment, unduly, indifferently, or perhaps erroneously exercised, while the other arises from an inability of the judgment to act properly; the one offending against regulations established by custom, the other acting in opposition to those rules dictated by reason; the one, though in some instances not admitting of explanations wholly satisfactory, yet offering nothing in extenuation which is opposed to sense,—the other, capable of adducing no motive that does not involve an absurdity; the one acting according to a judgment based on principles resulting from his own rational, though, it may be, erroneous or perverted conceptions,—the other, acting according to fancies based on premises which admit of no recognition.

The elucidation of the question we are immediately discussing does not demand the same close analysis of the mental or moral intelligence, in their mutual relation, as our investigation into the subject of moral insanity will hereafter entail; we shall, therefore, for the present, rest satisfied with declaring that, in the human mind two principles are recognisable—an intellectual and moral—which, though capable of their distinct exercises, are for the ordinary purposes of life intimate in their association, and harmonious in their co-operation. For the fulfilment of positive duties it is evident that the direction of a discriminating judgment becomes essential,—the moral estimate of those duties being involved in the just appreciation of their relations—we shall, therefore, for the present, regard such a dependency as conceded, and proceed to the more practical exposition of monomania in its relations to crime.

Sir John Nicholl's opinion, in the case of Dew *v.* Clarke, makes insanity consist in the existence of delusion. Lord Erskine's views may be also quoted as propounding the same doctrine. Sir John Nicholl has defined delusion "as a belief of facts which no rational person would have believed." Lord Brougham has amended the same, and stated delusion to be "a belief of things as realities which exist only in the imagination of the patient." We have admitted that the fact of an opinion being altogether different from those ordinarily held does not, therefore, constitute it a delusion. That which is quite clear to one mind may be wholly inexplicable to another. An opinion which is the result of deep reflection and sound inference may, to those incapable of estimating the premises or inductions, appear as the offspring of a deluded imagination, or an overwrought fancy. The fact of an opinion being contrary to sound sense is no argument of unsoundness of mind in the person entertaining it, for an uneducated man may draw many inferences which are opposed to the simplest dictates of experience.

We do not wonder that an ignorant man should propound doctrines at variance with the admitted results of science; though we are ready to declare that similar doctrines, if advanced by another, might with truth be regarded as indicating his irrationality. We cannot regard the most decided change in the longest cherished opinions as in itself indicating unsoundness of mind; since this change may result from that greater capability for forming a judgment which increased experience, or more matured reflection, affords. "Though it may be an unsatisfactory reflection, it is yet a wise one, to consider our existing convictions as liable to error, like those which have preceded them." We are not at liberty to argue the irrationality of men who accord to sentiments which our better regulated reason may abhor, or our scriptural faith condemn, inasmuch as they may, for the entertaining of those sentiments, find such matter to form the basis of their faith as harmonizes with the unenlightened condition of their minds, though our intelligence altogether rejects the same as being opposed to every principle of right. In our estimate of the several delusions presented by the insane, we must therefore be ever careful to establish and maintain the distinction between *erroneous conclusions from facts submitted to the intelligence*, and *just conclusions from suppositions which originate in the intelligence.* A man in the first position may entertain notions altogether at variance with those commonly received, and be at the same time, in the psychical and legal signification of the term, sane;—while those in the second position may be influenced by the most dangerous sentiments, which, it is possible, escape detection until such time as some circumstance arises adequate to interrupt the ordinary latency of their course, and, as a consequence, to occasion their more prominent development. The mere diagnosis of monomania, irrespective of its association with crime, is thus proved to be surrounded by no ordinary difficulties.

How often has it occurred that death-bearing disease has silently progressed to such an extent as rendered its detection but the prelude to its close. The physical constitution possesses such a power of vital accommodation as enables it to tolerate any abnormal condition which does not of necessity interrupt its functional exercises. Post-mortem examinations have revealed important alterations of structure which, it may be, were never once suspected, or whose nature had at least never been determined. In psychical affections an analogy is fully sustained. That a man may be competent to conduct the ordinary affairs of life with credit to himself and advantage to others,—that he may be adequate to fill high and important offices, and, in the natural course of events, leave this world without a question respecting his sanity, or a blemish on his name,—while during the greater part of his life he was under the most absurd delusion, which was not detected simply because special circumstances did not lead to its prominent or unusual manifestation,—is a fact which Dr. Duncan in his recent work has established[a]. In this instance the evidence of the deranged intelligence rested on conceptions requiring for their exposition circumstances altogether different from those met with in the ordinary affairs of life, and were therefore held, as it were, in abeyance, because those circumstances calculated to develop the *animus* influencing the conduct did not prominently present themselves. In the year 1843 an inquisition was held before Mr. Commissioner Winslow upon a young gentleman of fortune, and of mild manners, whose insane propensity was connected with windmills. When being removed by his friends to a place where there were no mills, in the hope that the strange propensity would wear away, the youth formed the resolution to commit murder, in order that his residence might be thereby changed, which act he accomplished on the body of a child whom he induced to accompany him into a wood. Lord Esrkine[b], in the course of his defence of Hadfield, observed, that he remembered a man who indicted another for imprisoning him, and no act of the counsel (Erskine himself) could draw from him an indication of disordered mind; but when Dr. Sims appeared in court the man addressed him as the Lord and Saviour of mankind: on account of this extravagance the person indicted by him was acquitted. But the man persevered, brought another indictment, and, well remembering what had caused the former to fail, could not on this second occasion be brought to say a syllable indicative of his mental delusion. The existence of a delusion does not, therefore, imply our capability of detecting it, while its most prominent manifestation may in no wise accord to the character of the crime it originates. Crime is naturally supposed to be the offspring of motives of one kind or another. When insanity is advanced as a plea in its extenuation, it must be by justification of the act through reason of the motives, and the exculpation of the motives on the grounds of the delusive conceptions. Accordingly, we find that many very eminent authorities have argued the necessity of establishing the relation between the delusion and the act. We admit that in many cases a capability of doing so exists, and that, if such were possible in all, much anxiety would be spared those involved in their adjudication. Those instances, however, we have detailed, and others we shall enumerate, prove that it is not in the nature of insanity as a disease that such uniformity should exist.

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[a] Duncan, Popular Errors on Insanity, p. 55.

[b] London Medical Gazette, 1849, vol. ix. p. 1063,

In defending Hadfield for shooting at the King, Lord Erskine argued, "that to exempt from responsibility there must be a close connexion between the delusion and the act." Were this acted on, how few lunatics tried for murder would escape,—how many should fall victims to our incompetency to form just judgments. Hadfield apparently shot at the King with the view of being capitally punished for it. In the hope of insuring his condemnation at a time that he was perfectly conscious of right and wrong as regards the act, William Ross Touchett, brother to Lord Audley, fired at Thomas Smith with intent to kill, but was acquitted on the evidence of Dr. Monro. In both these cases there existed an insane desire for death, accompanied by the fear of committing suicide. Many similar examples might be adduced. Under such circumstances to regard the acts of the insane as those of a healthy mind would be to enable the lunatic to accomplish his wildest determinations.

"Nullum magnum ingenium sine dementiâ," is an aphorism which is far more true than is generally supposed. The peculiarities and more than eccentricities of many famous men prove them to have been under delusions of one kind or another, and the fact that they did not become criminal may be as much owing to the want of such an exciting cause as might interrupt the current of their thoughts, as any capability they possessed of successfully resisting inducements to crime. Dr. Rush writes of a judge and a divine, both confessedly insane, but whose discriminating judgment and refined eloquence on the bench and in the pulpit were admirable. Baron Swedenborg, who was adequate to perform the duties of his office as minister to the King of Sweden, was so mad as to pull off his hat and make obeisance to Moses or Elijah in a crowded street, and fancied that the twelve Apostles sat by him on twelve chairs in his apartment. We might particularize many other examples to prove that delusions of the most extravagant character may occupy the mind, and yet the individual be fully competent for the dispassionate consideration of the most intricate question not involving the subject matter of the delusion. Could we insure the non-extension of that particular state of thought, we might, with perfect safety, allow those thus affected to be at large, to manage their properties, and take part in the ordinary affairs of life. But does experience tell us we can do so? Because many who labour under certain delusions do not commit crime, can we therefore declare that those who are influenced by similar delusions are responsible for their conduct? Can we take upon ourselves to determine the secret workings of the intelligence, and affirm that a particular act is the result of the deliberate judgment, uninfluenced by those considerations which we know to exist, and admit are adequate to materially affect, if not wholly subvert, that judgment?

Lord Brougham's observations in his adjudication on the will of Sarah Gibson are both explicit and trustworthy in reference to this point:—

"If the being or essence which we term the mind is unsound on one subject, provided that unsoundness is at all times existing on that subject, it is only sound in appearance; for if the subject of the delusion be presented to it, the unsoundness of mind, as manifested by believing in the suggestions of fancy as if they were realities, would break out; consequently it is absurd to speak of this as a really sound mind, a mind sound when the subject of the delusion is not presented, as it would be to say, that a person had not the gout because his attention being diverted from the pain by some other powerful sensation, he for the moment was unconscious of his visitation. It follows from hence that no confidence can be placed in the acts, or in any act, of a diseased mind, however apparently rational that act may appear to be, or may in reality be."

We have already intimated our dissent from those opinions which, irrespective of the existence of a delusion, identify responsibility with the knowledge of right and wrong as regards the act committed. In the case of Martin, tried for burning York Cathedral, we find that he was fully conscious of the criminality of the act as regards its relation to the human law, but he said, "he had the command of God to do it." In those cases previously detailed the acts were known to be contrary to the law of both God and man, since it was such knowledge led to their commission, through the anticipation of the punishment which should ensue.

Those who have had opportunities of studying monomaniacal disease must have observed, that many of the strange delusions entertained are sometimes but slight perversions of a natural process of reasoning, and that in numerous instances "trifles light as air" lead to the commission of crime. Events which, under ordinary circumstances, would be regarded as of little consequence, to the monomaniac become the source of morbid excitement, since his mind is so thoroughly predisposed to their reception. Opposed to this, we may observe that real calamities which *suddenly occur, more especially if they be not consonant with the pre-existing delusion*, by withdrawing the mind from the ideal contemplation, have not unfrequently been productive of the greatest benefit to the disease. The effect is far different when such are but superadded to previously existing and similar anxiety or care, for under such circumstances the powers of the mind may be broken down by the various overwhelming influences, and one of the predisposing causes of the insanity become the proximate cause of the crime. This was manifested on the trial of John Ovenston, at the Criminal Court, October 27, 1847, who was indicted for feloniously shooting George Crawley, with intent to kill. In this case it appeared that Mr. George Crawley, who survived the wound, had been instrumental in having the prisoner's goods sold under a judge's order, and that the prisoner in the afternoon of the same day attempted his assassination. On the evidence of Dr. Conolly it was proved that the mind of the prisoner had been gradually losing its power from the difficulties by which he felt himself surrounded, and that the crisis had arrived when he committed the act; and he (Dr. Conolly) "did not consider that his being at the time of trial, or soon after the transaction, in a state of perfect sanity, in any way affected the opinion he had formed, or was at all inconsistent with that view of the question." Here we have the predisposing cause of the insane state—pecuniary difficulties—identified with the person of an individual (Crawley), and this individual becoming the proximate cause of the crime. This is as highly instructive a case as is on record, for there was no prominent delusion, Crawley being the true occasion of the immediate distress. There was the existence of explicable motives on the part of the accused,—revenge on the admitted cause of his distress. There was proof of premeditation in going armed to the office where the occurrence took place. There was the evidence of self-control and discrimination which enabled the prisoner to withhold his violence until a fitting opportunity offered to effect it. There was the testimony of the medical attendant of the gaol, Mr. M'Murdo, who "never observed anything to lead him to believe that he was of unsound mind;" while, added to this, the statements of other sensible witnesses were adduced, who affirmed that on those matters they were competent to form a judgment respecting the prisoner, he seemed equally sane as themselves. Yet, with this accordance of facts, and such corroborative testimony, one of the most experienced as well as distinguished psychological physicians of any age, Dr. Conolly, declared, "that he did not go the length of saying that the prisoner was unconscious of what he did, but he believed that he was acting under such an impulse as he could not control, and that he could not distinguish the wickedness of the act, although he was conscious that he was committing it." This impulse must have been the result of a monomaniacal conception identified with the person of Crawley, for otherwise, to use the words of Mr. Baron Rolfe in the case of Charles Burton, indicted for the wilful murder of his wife and child, " the excuse of an irresistible impulse, coexisting with the full possession of reason, would justify any crime whatever"[a]. To this latter case, tried at Norfolk circuit before Mr. Baron Parke, July 20, 1848, that of Ovenston was closely analogous, for in both the attempt at crime and its commission was suggested by a fact, not a delusion; both in their previous symptoms showed equal grounds for presuming the presence of disease; both after the commission of the crime attempted suicide; while, as regards the crime itself, there was this important difference, that on Ovenston's trial it was shown there were reasonable grounds for attributing the act to rational though vicious motives; while in Burton's case there was a perfect want of evidence to prove that any motives could have existed, since there was no known cause of disagreement between the man and his wife. The medical evidence in both was in favour of insanity, yet one was acquitted, and the other found guilty and sentenced to death, though subsequently admitted to be insane.

Mr. Baron Alderson's opinion, when addressing the jury on the trial of Robert Pate, may be here quoted:—"In the first place they must clearly understand, that it was not because a man was insane that he was unpunishable; and he must say that upon this point there was generally a very grievous delusion in the minds of medical men. The only insanity which excused a man for his acts was that species of delusion which conduced to, and drove him to commit, the act alleged against him. They ought to have proof of a formed disease of the mind,—a disease existing before the act was committed, and which made the accused incapable of knowing at the time he did the act that it was a wrong act for him to do." O upright judge, but most ignorant physician! Define how far insane men are responsible; associate in all cases delusion with insane criminal acts; diagnose in each instance the mind disordered previous to the consummation of the disease; identify the knowledge of right and wrong with the capability of voluntary action; or, in other words, attempt to lay down a rule which may fix to a standard the variable nature of man, and reduce to a special scale the mysterious working of Providence.

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[a] London Medical Gazette, 1848, vol. vii. p. 255.

The Advocate-General, in the case of Henriette Cornier and M. Dupin, on the trial of Darzac, has declared that monomania " is a chimera, a mere phantom, summoned as much for the purpose of snatching the guilty from the just severity of the law, as of depriving a citizen arbitrarily of his liberty"[a]. M. Collard de Martigny also asserts, that " monomania is nothing but a passion which might be stifled in its birth." Let us inquire into the truth of these opinions. Mills has observed, there are two sources whence knowledge may be derived,—directly and inferentially. The first involves the immediate exercise of our senses; the second implies a capability of comparison, and, therefore, presupposes a criterion for judgment. In our diagnosis of psychical as of physical disease, it is essential that the information derivable from each of these sources be fully sought out, in order that, through their relations, their separate value may be estimated. The mere presence of a certain physical sign may, it is true, present the most unmistakable evidence of a special condition which is so plain and tangible that all recognise its nature. In psychical disease analogous phenomena can be with equal facility appreciated. How often, however, does it occur that the presence of a physical condition rests for its determination, not so much on its individual physical indications as on their relations to other general indications which are at the same time present. In psychical disease the analogy is fully maintained; the latter, however, owing to its immaterial manifestation, requires a much closer investigation, and more intimate analysis; for not only must the essential nature of each indication be separately defined in the special and general relations to each other, but their accordance to the individual character be also determined before an opinion be offered on their importance as characteristics of vice or disease, which, as Koller well affirms, should be ever most carefully distinguished. The psychical as the physical constitution must be regarded as the ultimate expression of many operations which, in their normal perfection, preserve a certain unity indicating health. When in physical disease this unity is interrupted, the patient is himself not only fully conscious of such a fact, but generally presents definite indications of the same. Defective or diseased functional exercises proclaim their operations in language which cannot be misunderstood. Men are conscious of this in their own persons, and consequently, while those indications characteristic of health are preserved in another, do not readily credit the existence of disease, however energetically its presence be affirmed. In psychical disease there are numerous additional reasons why this unwillingness to believe, and inability to discriminate, should invest the consideration of many cases with extreme difficulty. Effects, not causes, are the chief elements in our opinion. We infer the latter through the former, and estimate the former from their relation to a variable standard. The evidence of disease in one may be identical with the exercises of health in another. When, therefore, the plea of monomania is adduced as extenuation for crime, there is often nothing more difficult than to believe that acts, which accord in their progress to the ordinary routine of natural events, are the result of a morbid condition of thought, and we do not, therefore, wonder that many are to be found disposed to doubt the possibility of such being the case. To deny the presence of such a disease as monomania entails the proof of its existence, which is invested with this difficulty, that its evidences may rest on symptoms which, though perfectly explicable to the mind of the investigator, are altogether different in their relations to that mind of whose nature they are the chief indications. The error most usual to those who have not studied criminality in its psychical associations is this:—Its evidences are estimated, not in their relations to the mind of the individual accused, but to an admitted or presumed standard of mind. Ordinary observers draw their inferences according to the power or influence of their own motives as compared with their own position, rather than by their estimate of the motives which might actuate others in a far different position to commit the same act. We seek not by this to argue that the distinctions between vice and virtue require for their establishment fine-drawn subtleties or abstruse calculations; but we affirm that, because the practice of either may coexist with the perfect exercise of reason, such affords no just ground for inferring their identification with any particular mental state. Experience confirms this, since the monomaniac may be distinguished for moral excellence, and the criminal be altogether free from the slightest taint of disease. How then is the fact of unsoundness of mind to be determined if we admit that similar symptoms are met with in mental conditions so different? It by no means follows that because the same elements exist in separate bodies, those bodies are identical, or that in our estimate of vital actions a similarity of symptoms is confirmatory of a uniformity of disease. *The value of symptoms rests on the order of their ap-*

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[a] Psychological Journal, vol. i. p. 333.

pearance, progress, and combination. In psychical affections this is abundantly manifest, and in none more so than in that of monomania, whose existence has been thus questioned.

We have defined monomania as a disease in which the mind appears to suffer from a paralysis of its powers of conception, and is inadequate to appreciate the general or special relations which the subject matter of the monomaniacal conception involves. In the most healthy mind there is nothing more difficult than to unlearn, that is, to divest the mind of preconceived notions, in its abstract consideration of any matter involving the simple logical relations of these notions: and why? To do so requires an original and vigorous effort of thought, and the independent operation of a preoccupied intelligence, which, on the particular matter to be investigated, is in the most eminent danger of being abnormally or deficiently exercised. The mind in which a monomaniacal predisposition has been established has each of its natural tendencies exaggerated, and therefore it is that, with a process of reasoning insanity, a patient so affected is at times not only singularly pertinaceous in the defence of his absurdities, but is also enabled, as in the case quoted by Lord Erskine, to baffle such inquiries as might be instituted into their mental condition.

There is, to diminish the difficulty in our diagnosis, a remarkable and close analogy between the progress of crime and that of monomania. This assertion may appear paradoxical, since the analogy might be presumed to have a contrary effect: why it is so will be apparent.

Most criminal acts may be regarded as the ultimate operation of vicious habits, in which the infringement of the civil law is superadded to the habitual disregard of each ethical relation; under these circumstances the nature of the act to be considered manifests such conformity to the previous character, that no one questions the operations of justice, or hesitates to believe in the full criminality of the offender. The mental process by which a delusion becomes established, and the stages of vice preceding the perpetration of crime, are equally progressive. The first crime, like the first monomaniacal supposition, the moral as well as mental intelligence may repudiate; fresh inducements to crime occur; the moral sense may yield to the temptation, yet be conscious of the fault, in the same manner as the mind of the monomaniac recurs to the supposition, it *in initio* admits to be unsustainable. Temptation successfully resisted loses its power—temptation when yielded to increases in strength. Thus, step by step, and stage by stage, a certain condition becomes established, be it monomania or crime. In the commencement of the first, it is quite possible that whatever the nature of the monomaniacal tendency be, its relations are estimated according to the dictates of sound reason, and the delusive conception dismissed as soon as formed. A period of mental freedom elapses; thoughts of the same character recur; circumstances may conspire to confirm them; with every confirmation the opinion they tend to is strengthened, and with the strengthening of the opinion the intelligence is rendered, so far, less disposed to question its accuracy. In the progress of crime a similar progressive movement is observable,—"*nemo repente fuit turpissimus*" being most true. It is by acquiescence in vicious practices an aptitude for crime becomes established, when the moral intelligence, failing to enforce its dictates, ceases to respond to the perception of right.

A certain similarity in the nature of the progress of disease and vice is thus maintained. As crime entails a breach of some regulation appreciable by the general perception of man, and usually affecting their immediate interests, its discovery is seldom a matter of difficulty; but, inasmuch as the evidences of monomania not unfrequently accord to the natural exercises of man, its diagnosis, it is possible, may be most obscure. Juries are therefore fully justified, while the law allows to them the privilege of pronouncing judgment respecting such matters, to hesitate in delivering an opinion; since in examining their own hearts they may find much to correspond with motives or conduct of whose nature they are, under the most solemn obligation, called upon to determine. "How few," as Dr. Conolly so truly remarks, "can sincerely say that in themselves no foibles or imperfections, no passions or heedless impulse, no sins, presumptuous or conceded, exist, which, in certain circumstances, might not have led to sorrow, or never-ending regret or despair, to crime or to shame"[a].

"The trials of life are like countries, every one has his own, and to attempt to reduce them to one common type would be to set aside the peculiar sensibility proper to each"[b]. Divine law, however, ordains that our natural emotions be held in regulation; human justice demands that their injurious exercise be punished, unless it be proved that the individual was, at the time, irresponsible. This is, we contend, the great question for the physician, the more so when we reflect how much of misery, and how much of crime, do men voluntary create for themselves. Many are to be met with who willingly abandon themselves to particular habits, and live in disregard of ordinary rules. Society, as we have observed, may be indifferent to the sentiments of the one, and tolerate the peculiarities of the other. Each one claims his right of private judgment and independent action—it is conceded to each, but for mutual regulation a certain conformity of the will to the law is required, since a spirit of duty and power is thereby secured; for, were men permitted to conform the laws to their will, with the difference of the will there would be a difference of the law, and there should be an end to anything like uniformity on earth. Peculiarity of opinion is one thing, peculiarity of conduct is another. The law seeks not to recognise any peculiarity of opinion, as being identified with irresponsibility, until this peculiarity, of whatsoever nature it be, becomes associated with such conduct as proves the individual to be so completely under the influence of that opinion, that his actions are incapable of being regulated by other motives than those which that opinion may supply.

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[a] Croonian Lectures, Lancet, vol. ii. 1849, p. 521.

[b] Chateaubriand.

We have particularly impressed the necessity of fully analyzing the individual character, and inquiring into the previous history, before attempting a diagnosis in mental disease. Circumstances will occur in which the fullest knowledge of both affords little guidance in the formation of our opinions beyond the negative proofs they may offer of a special disposition. Many men are found to be labouring under a delusion, whose previous conduct has not demonstrated the process by which that delusion has been established. Many individuals are, undoubtedly, guilty of the most flagrant crimes, whose previous life was strangely at variance with the execution of the particular act. Knowing the passions, the desires, the motives, which influence the minds of men,—the deceptions practised by those who assume virtues which they do not possess,—we are led to the conclusion that, though every moral observance is an important reality, yet the absence of crime is no guarantee for the presence of virtue. Nay more, that the exercise or practice of mere moral observances cannot be received as conclusive evidence of the existence of a high moral sense. Men may cherish feelings of malignity against some one of their fellows, which, in accordance to the opinions of others, they endeavour to subdue. Criminal desires may influence the conduct, which is manifest in the exercise of practical benevolence with those—

> "Who thus do clothe their naked villany
> With old odd ends, stolen forth of holy writ,
> And seem as saints when most they play the devil."

In men of this class hypocrisy envelops rascality until such a time as fitting circumstances develop their true character. These circumstances may not arise until the opportunity occurs for the perpetration of a particular act, and then, when society demands the investigation of that act, a confident appeal is made to the previous career to prove, not the non-existence, but the non-development, of criminal desires. It is true that in such an instance, the commission of crime may argue that the passions so far overcame the judgment as to render it incapable of estimating the relations, or calculating the consequences, which might result from the perpetration of the act, of whatsoever nature it be, and the excitement of the moment may, in rare cases, to a certain degree extenuate its commission. This is the most that justice can concede, for did such excitement excuse the crime, the majority of capital offenders would be acquitted. The actions rather than motives must constitute the test of criminality. The individual application of this test rests on the opinion of the jury on the one hand, and the diagnosis of the physician on the other, who in such an instance are called on to discriminate between the hasty execution of a premeditated act, where the fact of the premeditation may be concealed, and the commission of a similar act under a combination of circumstances which the offender had not the power to control.

In seeking to establish the relations between monomania and crime, it would be a grievous error to suppose that all monomaniacs must be criminal. The indulgence of particular whims may be indicative of folly of the most extreme degree, which does not become crime until such time as, for the ultimate gratification of a peculiar fancy, of whatsoever nature it be, the axioms of morality are wilfully violated. Instances are on record in which, for the possession of matters not within their reach, thefts have been perpetrated by individuals in whom an insatiable desire for the collection of curiosities of one kind or another existed. The illegality as well as abstract immorality of the peculation may be fully admitted, but the capability of resisting temptation be wanting, even though in all other respects the strictest observance of propriety, and the nicest sense of honour be maintained. Monomania may in such individuals lead to actions which their intellectual and moral *animus* condemns, and a difficult question arise as to how far such individuals are responsible. For, though the intelligence may be weak, it does not follow that it must be wicked, since it is in the fact of moral deficiency the criminality rests.' This mental inability to direct the moral intelligence originates a proposition as to how far both, in such an instance, or in similar instances, may be associated.

The subject of Monomania is one so extensive and important that to enter minutely into a detail of the peculiarity of its manifestations, the complexity of its symptoms, and the variety of its terminations, should necessitate so comprehensive an analysis of mental operations, so close an investigation of the correlation of the psychical and physical constitution—as evidenced in an almost endless variety of cases, that it would be vain to hope to do more here than state those principles which should guide us in instituting so serious an inquiry.

A criminal act is attributable to a monomaniacal condition. The causes which may have eventuated in this condition come to be investigated, and are found capable of being ranged under the following heads:—

I. Causes apparently appreciable by ordinary observers: the insane act corresponding to the usual operations of crime.

II. Causes explicable solely by the psychopathic condition of the individual: the inducement to the insane act originating in the deranged intelligence.

III. Causes identified with the personality: the insane act being associated with morbid physical conditions.

Of cases illustrative of the *first* class of causes we might adduce many examples similar to that of John Ovenston, which we have detailed: differing from moral insanity in many very important particulars, though coinciding with it as regards the moral abandonment manifested in the act,—distinguished from impulsive insanity in the predetermined direction of the act. The diagnosis in cases of this nature must rest on the individual application of psychological principles:—*The relation of motives to the mental condition at the period of the perpetration of the act, rather than the accordance of those motives to the character of the act*, which it is quite possible may correspond to the ordinary operations resulting from a healthy though vicious mind. In such a case the predisposing and exciting causes are closely analogous to those adequate for the production of crime, and require for their just appreciation the nicest application of medical principles, which determine the value of a special symptom, not as an isolated phenomenon, but as the appreciable result of progressive, though possibly latent operations, to be estimated in its relation to the morbid condition it indicates, as well as to the sum of those general symptoms of which, perhaps, it constitutes the most important item.

To the *second* class of causes by far the greater majority of cases of monomania may be referred. Esquirol has calculated the combination of hallucination with monomania as about 80 per cent. The process by which such a mental condition is accomplished, it has been observed, finds in the progress of vice its analogy,—at first a caprice, then a doubt, followed by a period of repose. A return of doubts, which from favouring circumstances become transformed to convictions, the more decided as they are the less probable,—intervals of rationality alternate with periods of delusion. As the disease advances those intervals become shorter in duration and less frequent in occurrence, until at length the thoughts are so thoroughly occupied as to be rendered incapable of divesting themselves of the conception by which they are morbidly subjugated, and to which they are, therefore, irresistibly attracted. It is possible this essentially deranged mental process in one may so closely accord to the operations of health in another, that until some circumstance leads to its consummation, its true nature is not appreciated. Or, it may silently progress, and eventuate in criminal acts so inexplicable as to demand a close psychological investigation of those motives which might possibly have induced their commission. The nature of the delusion may be as varied as there are different objects and different subjects to act, or be acted upon, being equally dependent on the individual character and position, as on those general circumstances from which it may originate. The monomaniac may, under the influence of his delusive conceptions, fancy that his relation to all around is changed, and, actuated by such a delusion, perpetrate extreme acts. Or, while preserving his own identity, he may imagine that others are changed in their relations towards him, and, considering himself the object of special persecution, resolve on some act which he conceives is calculated to insure his personal safety. Though in the former instance there may be a facility of detecting the special condition, it not unfrequently occurs,—consequent on the abnormal reasoning process which becomes established in a mind so affected,—that its recognition is involved in much obscurity. In the latter it is quite possible that the criminal act be the first indication of the monomaniacal condition. In such a case the differential diagnosis as to the character of the insanity rests between the hasty execution of a premeditated act, in which the fact of the premeditation has been concealed, and an unaccountable and impulsive movement to commit an act, unthought of previous to its perpetration. In contrasting the insane with its analogous criminal act, though we may have the former, according to the deliberate determination of a depraved and wicked mind, it will, notwithstanding, be found to result from mistaken though apparently rational conceptions, adequate to subvert the healthy exercise of the judgment. Under such circumstances an inquiry may arise as to how far the apparent identification of crime and insanity might warrant a modification of treatment, in which the rigid discipline of reproof and the curative resources of medicine should be conjointly exercised.

It is to this class of causes that the influence exercised by religion may be referred. The writings of Dr. Cheyne and others have fully shown the error of those opinions which would attribute to religion a capability of originating derangement of the mind. It has been satisfactorily proved that religion, *per se*, is not only wholly inadequate to such an end, but is the surest preservative of that mental peace, and proper regulation, essential for happiness and identified with wisdom. It is true that there are many of what are termed "religious monomaniacs" to be met with, who, like those unhappy fanatics, Arthington, Coppinger, and Hacket, executed in the days of Queen Elizabeth, may fancy themselves specially directed by Heaven to accomplish particular acts; or who, like Martin of later years, may think that in violating all human enactments, they are thereby doing God service. When we recollect the solemnity and magnitude of the interests involved in religious considerations, and the important position such must occupy in all sane minds, we cease to be surprised that the mind, from any cause becoming deranged, while the thoughts are unsettled, and the imagination wandering without a fixed object,—finding so fruitful a source for its extravagant exercises, and one so thoroughly adequate to supply food for reflection, should adopt some delusion identified with, or arising from, the magnitude of those interests therein revealed. Phenomena are thus superadded to a disease which exists: they are its consequences, not its cause. Religion, under such circumstances, does not overcome reason, but is perverted by it. The monomaniac fancies that he receives such a message as either communicates the will of God to him, or discovers certain truths which to others are unknown. His disturbed reason establishes a necessary connexion between the matter of presumed revelation and a necessity for some particular act, the fulfilment of which proclaims his condition.

The *third* class of causes necessitates many psycho-physical investigations which physicians are alone adequate to institute. Dr. Winslow has fully established this fact. Those who have witnessed the progress of hypochondriacal insanity will at once affirmatively respond to this distinguished author's inquiry, who, when speaking of the psychological estimate of the actions of men, "the records of whose lives form the dark scenes of history, and present to the world a continuous career of morbid selfishness, crime, cupidity, caprice, tyranny, brutality, and vice," asks: "May not all these monstrous departures from ordinary and healthy modes of thought, impulse, and action, constitute evidence not only of depravity and vice in their ordinary signification, but *of undetected, unperceived, unrecognised mental disease, in all probability arising from cerebral irritation, or physical ill health?*"[a] In the case of Arnold, who was indicted at Kingston-upon-Thames, before Mr. Justice Tracey, in the year 1724, for felony in wilfully shooting at and wounding Lord Onslow, "it was shown that he had not only been long subjected to aural and visual illusions, but he was habitually under a variety of delusions; imagining, among other extravagances, that Lord Onslow was in his bosom, constantly persecuting him, and preventing him from eating, drinking, sleeping, or being at rest"[b]. It is true that under circumstances of this nature little doubt might arise respecting the nature of the act resulting from an intelligence so decidedly deranged; other cases, however, will be met with, wherein the close association of the morbid condition and the insane act are by no means so apparent, although the dependence of the one on the other as certainly exists.

The consideration of monomania as a plea in extenuation for criminal acts is thus proved to be invested with varied difficulties. The necessity of carefully and fully investigating each particular case,—making each inquiry a separate problem to be decided on its own merits, must be obvious. By doing so we can alone hope to arrive at truth, since we believe it will be found that experience and observation attest:—

I. That the law has failed to lay down such a definition as might indicate each example of monomaniacal insanity.

II. That the existence of monomania does not depend on the presence or absence of any particular symptom or group of symptoms.

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[a] Lettsomian Lectures, by Forbes Winslow, M. D.

[b] Psychological Journal, No. 26, p. 186.

III. That, though the essential nature of the disease implies the existence of a delusion, the symptoms are not in all cases adequate to establish the nature of the delusion.

IV. That, though a recognised delusion may lead to the perpetration of a criminal act, the nature of the criminal act does not of necessity accord with the character of the delusion.

V. That the monomaniacal condition involving the delusion may have its origin in circumstances apparently admitting of the most rational explanations.

VI. That the perpetration of a criminal act may be the first prominent evidence of such a monomaniacal condition.

VII. That the knowledge of the illegality of a particular act cannot be considered as evidence of a criminal disposition in the commission of that act.

VIII. That, though the civil relations of a particular act be fully appreciated, its ethical relations in the mind of the monomaniac may invest its commission with the highest moral excellence.

IX. That, though the civil and ethical relations of a particular act be fully appreciated, its commission cannot therefore be considered as evidence of soundness of mind.

X. That the coexistence of this knowledge respecting the nature of the act may to the monomaniac be the chief motive for its commission.

XI. That, though the question of the legality, wisdom, or criminality, of a particular act be open to the discussion of all, its psychical relations to the personality are essentially the province of the physician.

XII. That the question of criminal responsibility is one involving the existence of psychological freedom, which demands an intimate knowledge of the psychical and physical constitution in their relations in the individual.

XIII. That this knowledge implies an investigation of the previous history and circumstances, and a due estimate of those various modifying causes, which directly or remotely may affect the inquiry at issue.

(*To be continued.*)

ART. XIII.—*Reports in Operative Surgery.* By RICHARD G. H. BUTCHER, Member of the Council and Fellow of the Royal College of Surgeons in Ireland; Examiner on Anatomy, Physiology, and Pathology thereto for five years; Surgeon to Mercer's Hospital.

I. *Necrosis of the Lower Jaw, requiring its Excision from the Articulation on the right Side, near to the Symphysis.*

AT the present time it is not my purpose to dwell upon the causes most frequently operating in the production of necrosis of the jaws; neither do I intend to search out and follow nature through the intricate ways by which she accomplishes her object, in casting off the deadened bone. In many cases of necrosis the sequestrum is separated, liberated, and a perfect substitute formed, the entire process being accomplished through a continuous chain of events, uninterrupted till perfected. In other instances it is not so: the process is retarded, arrested; sharp irritation or wasting hectic settles on the sufferer; the exciting cause *must* be taken away,—a joint becomes implicated and opened, rendering it necessary to remove the limb altogether; or again, life may be threatened from the wounding of a large bloodvessel by the separated shaft of a long bone, or by a detached spicula[a]. Lastly, the sequestrum, started from its bed by the spasmodic action of neighbouring muscles, may become a source of so much irritation to surrounding parts, as imperatively to demand its excision; *this*, as a cause for operative interference, I shall now proceed to illustrate by a remarkable case which recently occurred in hospital practice.

M. C., aged thirty-five years, was admitted into Mercer's Hospital on the 3rd of April, 1854, labouring under a train of the most distressing symptoms. The following history of her case she gave from its commencement, through its progress:—

In December, 1853, her husband, when drunk, struck her a violent blow with his clenched hand on the right cheek and side of the lower jaw; she was prostrated, and remained senseless for some time after; extensive ecchymosis rapidly supervened; high and active inflammation seized upon the part, and considerable swelling, widely implicating the tissues around, soon masked the features. So violent was the shock and severe the primary effect of the injury, that the patient was necessarily confined to bed for several days, during which time very active treatment was resorted to. The most urgent symptoms demanding attention at this time were inordinate swelling, and inability to open the mouth, arising from total paralyzation of the muscles of mastication.

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[a] Dublin Journal of Medical Science, November, 1835.

By active local depletion, lowering the system by purgatives, &c., the extension of inflammation was checked, while its destructive consequences upon those parts implicated from the first were not to be averted, and could not be stopped; a dead heavy pain fixed in the jaw-bone corresponding to the stricken part, and this for many weeks, night or day, never ceased. Towards the termination of the ninth week a large abscess formed beneath the angle of the jaw, which was opened, and a quantity of matter discharged; *this*, looked upon by the sufferer as *critical*, afforded no relief—no cessation from the burning pain in the bone—no increased power over the muscles of the locked jaw. Shortly after, nature effected an opening lower down in the neck, through which the fetid discharge flowed in abundance, and by which two or three small pieces of bone escaped; about this time, too, the molar and bicuspid teeth became loose and elevated from their sockets, and shortly after fell out, but without being followed by any amelioration of suffering. Violent, fixed pain settled in the articulation and ramus of the jaw on the affected side; most severe about three weeks before her admission to hospital. At this time I first saw the patient; upon examination it was evident that necrosis was accomplished from the condyle to the symphysis menti on the right side; the condyle and the neck of the bone were apart from the rest; these were loose, and afforded crepitus upon the slightest motion; nature accomplished the loosening of them, but was too tardy in their removal: intense suffering, loss of rest, alarming emaciation, called for more speedy relief—demanded the interference of the surgeon. By detaching the cheek from the maxilla through the mouth, I was enabled to seize with a forceps the portions of bone alluded to, and effect their extraction; the condyle had separated from the interarticular cartilage, and also left behind its cartilage of incrustation. At this time I did not think it necessary to remove the remaining portion of the deadened bone; a substitute was being formed, and I did not think it prudent to interrupt a process rapidly being accomplished towards repair, without any pressing or urgent symptoms.

For some time relief was afforded, and all distressing symptoms removed by the extraction of the head and neck of the bone, but unforeseen circumstances soon called for more decisive and severe operative measures,—the removal of the entire deadened part. Shortly after the above date, the patient was hurried to hospital on account of the alarming symptoms created by the starting of the sequestrum from its bed posteriorly; it projected remarkably towards the pharynx, and created violent spasms in the muscles of the region, together with a total incapacity of swallowing softened solids; and so materially were the functions of the part interfered with, that several short and repeated acts of deglutition were necessary before a spoonful of fluid, or even the saliva, could be got down. By this displacement of parts the function of respiration was likewise materially embarrassed, their number being irregularly accelerated, sometimes prolonged, at others, short, ringing, and terminating in spasmodic cough. The alarming train of symptoms just detailed could fairly be ascribed to the pressure exerted upon the pneumogastric nerve and its branches by the displaced sequestrum, therefore, the imperative necessity for its removal. Such being my opinion, I endeavoured to extract the bone through the mouth, but failed in doing so, owing to the close manner by which it was wedged in by new parts, and surrounded with healthy structures; it remained firm and immovable. This deadened portion of the bone was very extensive, including the angle and ascending ramus, together with the side of the maxilla, close to the symphysis. Being foiled in the simple way, I was compelled to incise the cheek after the manner requisite for excision of the lower jaw, proceeding as follows:—The head being steadily supported, a perpendicular incision, commencing in the mesial line beneath the red margin of the under lip, was carried downwards beneath the chin; a second, commencing at the angle of the maxilla, was carried forwards along the lower border of its side, and made to meet the termination of the vertical one; a ligature was next cast round the facial artery and tied. The flap was then rapidly dissected up, the knife being at once thrust through the mucous membrane, and the cavity of the mouth fully exposed; the dead bone was then grasped in a strong forceps, and being liberated from the parts around, was wrenched from its bed. Some smart hemorrhage followed, from the violence inflicted on the reparative material thrown out; however, dossils of lint and dry sponge, aided by pressure, were effectual in its suppression. The flap was next laid down and maintained in its position by two points of the twisted suture in front, and by several of the interrupted, in its longitudinal axis. Immediately after the operation the patient fell into a quiet sleep, which lasted several hours, and when she awoke partook freely of drink and softened food, without any uncomfortable sensation whatever. She made a very rapid recovery, the wounds healing nearly in their entire extent by the first intention. All through the after treatment it was necessary to keep the jaw pressed over towards the affected side, and well supported by means of a gutta percha splint moulded for the purpose; this effectually counteracted the muscles on the sound side from dragging the bone in that direction, which they were prone to do ever after the solution of continuity in its structure; by the adoption of this simple expedient, until the newly formed substitute had acquired sufficient density to resist, all deformity was averted, and the symmetry of the face preserved.

Four months have now elapsed since the operation, yet there has been no attempt at ossific deposition. A fibro-ligamentous structure, dense and firm, occupies the space corresponding to the removed bone: this, too, shaped in close similitude to the part taken away. The patient possesses the power of opening the mouth to the full extent, and closing it perfectly, and so admirably has the mechanical means employed fulfilled the indication of preventing any lateralization of the lower jaw, that the inferior incisors lie evenly beneath the upper, holding their relative relationship each to the other.

It is an interesting point to conjecture how the articulation is circumstanced while permitting the freedom of motion referred to. From a close and attentive conception of the prominent pathological changes, I am of opinion that the original incrustating cartilage of the condyle has been, as it were, engrafted upon its substitute, such an arrangement still further insuring the proper attachment of the external pterygoid muscle, through the intervention of the interarticular cartilage and perforated capsule.

II.—*A remarkable form of Fibro-Cellular Tumour, or Cutaneous Outgrowth, attaining to great magnitude; removed by operation.*

There are two forms of tumour involving the integuments and areolar tissue beneath, which, upon careless inspection, may be judged analogous; yet, on more close investigation, a wide difference is revealed—in the one, new productions are added, arising and increasing almost insensibly, without the presence of pain, and exempt from local or general disturbance, the result of perverted nutrition. The other, arises from interstitial deposition in the cutaneous and areolar textures, the result of repeated or long-continued attacks of inflammation, attended both with the usual symptoms in the part, and in proportion to its acute type manifest in the constitution: to the latter may be referred those enormous swellings in which the male external organs of generation are sometimes involved, more particularly in warm climates, a disease of the same nature as that which is called the Barbadoes leg. The former manifestation of disease is, I think, faithfully portrayed in the description of the following remarkable case upon which I recently operated:—

R. C., aged twenty-six years, by occupation a labourer, was admitted into Mercer's Hospital in May, 1854. He had come up from the country in order to have a large tumour removed from his arm. The following is the history of the case: The tumour was of eight years' growth, and commenced as "a small lump in the skin" above the left elbow on its inner side; from this point, as a centre, it gradually increased, first rather prominently, afterwards extending itself in the skin above and below the joint; twelve months elapsed, when the integuments appeared too loose for the arm, and showed a disposition to hang; the only sensations which the patient experienced in the part, at this time, different from the sound limb, were occasionally a burning heat, sometimes attended with tingling, but never associated with pain. During the first six years of its growth the enlargement was steadily progressive, involving the integuments to the extent of two-thirds of the circumference of the limb's girth, passing along the upper arm to the axilla, here likewise implicating the same structure covering the latissimus dorsi muscle, where it enters into the constitution of the posterior fold of this region. In the same way the integuments of the forearm participated in this remarkably hypertrophied condition, and though its circumference was not seized upon to so great an extent, yet all along its inferior and posterior surface the same change was strikingly developed. Thus, from the morbid changes brought about, a tumour pendulous in its character and extending from one end of the limb to the other, was created. From this time to the period of his admission to hospital it gradually increased, and presented a few additional features, of which the following are not the least remarkable:—the bulk of the tumour was very great in its long axis, the measurement over its surface being 2 feet 8 inches; over the surface in its transverse axis 22 inches; while the most important measurement, in a practical point of view, that around its base, exceeded far what is usually met with in pendulous tumours, being 2 feet 9 inches. A line passed through the tumour transversly at its attachment to the limb measured from 3½ to 5 inches; while inferiorly, nearly at its most depending part, a like measurement in different points varied from 9½ to 11 inches. From this description it follows that the tumour was somewhat irregular on its surface, and this was most conspicuously obvious on its external aspect; here two or three very remarkable pendulous masses, bulging outwards, and separated by sulci, were placed, while the inner wall of the tumour was smooth and somewhat concave inwards. Again, the integuments covering the external and inferior boundaries of the mass were coarse and nodulated, while internally they were in a normal state for three inches below the inferior margin of the limb, being furrowed by the weight and traction of the developed growth. The sebaceous follicles were greatly enlarged and rendered slightly depressed, while a thickened, slightly elevated base surrounded each. Above, the disorganized skin presented a dusky yellowish hue and dense appearance, much resembling pork skin, while over the most prominent and depending parts it assumed a livid red colour, evidently dependent on a stasis in the venous and capillary circulation; in some points so great was the congestion that this stage passed into inflammation, superficial suppuration, and ulceration in patches. However, it is worthy of remark, though the capillaries of both systems were more or less conspicuous, yet no large veins traversed the surface of the tumour; and the integuments, thus altered in colour, distorted in delicate arrangement, nay more, apparently nodulated, yet to the touch presented an unnaturally soft, flocculent feel. In the production of this enormous growth the layers of the skin seemed to be as much implicated as the cellular bed beneath, or, to speak more accurately, the morbid change set up and developed in the former was readily transmitted to the latter, both ultimately becoming matted together, without forming any dense attachment to the fascia investing the limb, an arrangement which permitted the tumour to swing about on each motion of the body.

By poising the tumour on the hand the integument upon the superior surface of the limb lost its glazed appearance, produced by the straining of the pendant weight, and by elasticity almost recovered its natural situation. On handling the tumour some parts in its most prominent portions seemed denser than the rest, while fibrous bands could be felt traversing it in many places; no uneasiness or pain was experienced by even rough manipulation; no throbbing of large arteries, or *bruit*, pervaded any part of the growth, neither were there any dilated large veins coursing upon its surface; the radial and ulnar arteries could be felt beating at the wrist, and the brachial vessel through its entire course, and curved downwards from its normal position. Several smaller tumours of a similar nature to that described were located on various parts of the body: the largest of these, about the size of a turkey's egg, was placed over the lower end of the radius, and on its outer surface, this, though on the same limb with the large tumour, was not connected to it. Two pendulous growths of a like nature, each about the size of a filbert, lay over the left scapular region close to each other, while many, each about the size of a pea, studded the integuments covering the abdominal muscles.

After thoughtfully weighing these various interesting particulars, and satisfying myself by a very rigid and careful examination that the lungs and other internal organs were healthy, I assented to the man's request to remove the tumour, and operated after the following manner. And here I would add, before having recourse to any operative measures, it was absolutely imperative to improve, by medicine and regimen, the debilitated condition of the patient. Tonics, animal food, wine, eggs, milk, were liberally administered for a period of three weeks, when the assimilating powers and strength of the patient were much improved.

The patient was placed in the recumbent position on the operating table, and quickly brought under the influence of chloroform; the arm was separated from the side at right angles, and firmly held by an assistant, while a second assistant made pressure upon the subclavian artery above the clavicle; standing in front of the limb, I commenced an incision high up in the axilla, and continued it downwards for about eight inches in a straight direction, corresponding to the line of junction between the healthy and diseased skin already alluded to; from this the internal wall of the tumour, by repeated and rapid sweeps of the knife, the growth was freed from the healthy integuments. During this dissection the musculo-spiral nerve was exposed, greatly spread out, and being liberated in its attachments from the weight which dragged it downwards, was restored to its original position, together with the fibres of the coraco-brachialis muscle. Through this intricate dissection, as vessels sprung, ligatures were applied. The superior part of the tumour being thus detached on its inner side, I proceeded to set free its outer attachments by a similar mode, rapidly drawing the knife over the posterior fold of the axilla from the highest point where the tumour was connected, then along its external wall corresponding to the inferior margin of the arm, and, carrying it to a like extent with that in front, by a little deeper dissection the upper half of the tumour was liberated. And the advantage of this proceeding now became apparent, for the detached part was grasped by an assistant and all effusion of blood by returning vessels prevented. I next proceeded by a like method to continue the dissection in front, and afterwards posteriorly, so as to liberate the tumour from the fore-arm, in each region preserving whatever integuments presented a sufficiently healthy condition for repair,—thus the great mass was removed. As at the commencement each vessel was tied when it yielded blood, so all through the operation numerous arteries were ligatured; indeed the vascularity of the tumour far exceeded that which I have usually met with in fibro-cellular growths. Many of the arteries were fully as large as the radial or ulnar; and I ligatured twenty-six in all. On dressing the wound the integuments, so carefully preserved, corresponding to the arm, admitted freely of being brought in contact, and were retained so by several stitches of the interrupted suture, while over the elbow and fore-arm I was compelled, from the diseased condition of the parts, to remove as it were elliptically so extensive a surface that this most desirable object could not be achieved. The ligatures being carefully protected, the exposed parts were covered with lint steeped in oil; a retaining bandage was evenly rolled from the fingers upwards to the axilla, and on the anterior aspect of the limb a splint evenly padded was applied to prevent motion and preserve an equable support throughout. The effects of the chloroform quickly passed off, and so well did the man feel that he sought permission to walk to his ward, a request, however, which was not granted. Being conveyed to bed the limb was slightly elevated upon pillows, and a quantity of wine and opium administered, after which he fell into a quiet sleep, which remained unbroken for six hours; after awaking he took some strong broth, and expressed himself as being comfortable. At seven in the evening reaction was fully established, and now considerable arterial bleeding took place from the upper part of the incisions in the axillary region. I instantly cut across the points of suture and turned out all clots, thus exposing fully the divided surfaces; four vessels of magnitude yielded blood and were tied, besides numerous smaller ones poured it out freely from several points. Lint steeped in turpentine and thrust into the wound, together with careful finger pressure, in conjunction with an ice cap placed over the shoulder and upper third of the arm, in a short time commanded the hemorrhage altogether, and there was no return of it. For many days after, wine and spirits were very profusely given, together with the most nutritious diet, animal food, with broths, eggs, milk, &c. On the third day the dressings were disturbed, and a light poultice applied over the entire track of the wound. The stitches being unproductive of mischief were suffered to remain as long as the tenth day; by this time, too, nearly all the ligatures were cast off. Now the granulations began to appear, and quickly assumed an unhealthy, exuberant character. Support was afforded to the limb, at the same time a strong astringent application was effectively brought in contact with the entire surface, according to the following method: Lint being placed between the fingers, a bandage was turned around them and the hand to above the wrist; this being done, pieces of linen, sixteen to eighteen inches in length and four or five inches in width, were saturated with a strong astringent lotion, containing one drachm of sulphate of zinc and two of tannic acid, to eight ounces of water Each piece of cloth was then doubled on itself; one end was next steadily held by a dresser on the inner side of the limb above the wound, and the other I brought evenly beneath the arm, at the same time approximating the divided surfaces, thus making steady pressure until the edges of the cloth first laid on were overlapped. After this method numerous pieces were applied until the limb from the arm-pit to the wrist was closely enveloped. A few additional layers were next placed immediately over the wound so as to insure the presence of a larger amount of the astringent fluid, the entire being steadily retained by the bandage, continued from the wrist upwards. After a short time the advantages arising from this mode of dressing were conspicuously obvious; the granulations assumed a small, healthy, and florid colour, and quickly after new skin began to appear around the cut edges. For many days this local treatment was persevered in, and stimulants with very liberal diet allowed.

Thus the case progressed most favourably up to the 16th of July, when a most troublesome hiccough, continuous almost night and day, threatened to destroy the patient; by it the power of deglutition was impeded, and sleep altogether averted; for three days and nights this distressing symptom harassed him, and resisted every treatment. The Indian hemp failed; chloroform given internally did not arrest it; at length large and repeated doses of hydrocyanic acid in conjunction with tincture of castor and sulphuric ether checked it; for five days the patient was compelled to continue these medicines before the tendency to its return was prevented.

On the 23rd the patient was so far recovered as to be able to walk in the garden, and now, the period at which I write (the 3rd of September), the wounds are all but healed.

The external characters of the tumour, its form, size, colour, arrangement of vessels, I have already dwelt upon, and I shall now make some observations relative to its structural arrangement. On opening out the tumour after its removal many dense bands stretched through it in various directions, but most numerously in curvilinear lines, these possessed a considerable amount of elasticity; scattered here and there were other portions more solid, glistening, yellowish, and irregular, than the rest, in which many of these bands terminated. On manipulation before the removal of the growth reference has been made to these condensed parts. On section each presented a white firm tissue, composed of dense fibres closely interwoven and matted together, while, in the cellular beds surrounding each, small lobules of fat were here and there deposited. In other parts of the tumour the fibro-cellular degeneration was of an opaque, whitish colour, while in others almost pellucid, and of a grayish hue. These portions of the tumour bore a very close analogy to that form of growth described by Müller under the name of "Collonema." Though the bulk of the tumour was made up of dense, tough, highly elastic material, yet confined in its meshes was abundance of serous succus, which was liberally yielded on compression of the cut surfaces; this no doubt contributed materially to the springy feel elicited by touch. Many large vessels permeated the tumour; upon the surface of the cuticle the openings of the sebaceous glands and hair follicles were considerably enlarged, and each aperture assumed a longitudinal form, with a depression in the centre, while beneath the epidermis the cutis vera and subjacent textures presented an uninterrupted continuity. Under the microscope the filamentous tissue, characteristic of that structure after which the tumour is named, was everywhere visible.

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Art. XIV.—*Observations on Jaundice; and Hemorrhage in Affections of the Liver.* By Cathcart Lees, Physician to the Meath Hospital; Lecturer on Practice of Medicine.

Many cases of jaundice have occurred in which delirium, convulsions, and coma supervened, and proved rapidly fatal, although accurate examination failed to discover any mechanical obstacle to the passage of bile out of the system, the bile ducts being pervious and empty; so that this form of disease has been described as fatal jaundice from *suppressed secretion* of bile, which means, that the jaundice in such cases depends on the retention in the blood of the elements of the bile, which in the healthy state is separated only, not formed at the liver, and which, when retained, acts on the nervous system nearly as a narcotic poison,—causing a condition of the system analogous to that occasioned by the suspension of the secretion of urine in cases of ischuria renalis, or in some cases of albuminuria. Dr. Alison explains this by supposing that "the retention in the blood of matter destined to excretion is much more hurtful to the living body than the *reabsorption* into the blood of matters which have been excreted at their appropriate organs, but not discharged from the system in their natural way, owing to some mechanical obstruction in either the biliary or urinary passages." In reference to this class of cases, Dr. Budd, in his work on Diseases of the Liver, after detailing some observations recorded by Alison, Bright, Graves, and others, thus writes: "It does not seem possible to deduce from the cases that have been related any sure means of distinguishing jaundice that results from suppressed secretion, from jaundice produced by temporary closure of the ducts, except in the particular cases where the jaundice immediately follows a powerful emotion, or occurs in the course of purulent phlebitis; or in consequence of known poisoning; or where, as in the instances related by Dr. Griffin and Dr. Hanlon, it occurs with peculiar characters in several members of a family, or in several persons living together, in succession. In all these instances knowledge of the cause of the disease, or of some peculiar circumstances under which it may have arisen, gives significance to symptoms that would otherwise be vague and ambiguous. In other instances, where our judgment must be formed from the symptoms merely, the diagnosis is much more difficult." Now, it has struck me that the examination of the urine might be of some use in forming not only our diagnosis, but also our prognosis in these cases of jaundice, particularly as in none of the cases recorded by the writers I have mentioned is there any analysis given of this secretion. I have, therefore, had the urine in some cases of jaundice carefully examined by competent persons lately, and shall proceed to detail one case, and give the results of two others nearly similar, in all of which an important principle of the bile was detected in the urine.

Case I.—*Jaundice from Retention of Bile; Cholic Acid in the Urine*[a].

Michael Holloned, aged 48, was admitted into the Meath Hospital January 15, 1854. For two years previous to his admission he had been subject to occasional attacks of dyspepsia, which not being severe, and causing but little inconvenience, did not excite attention. In July last he first experienced slight difficulty in swallowing, which he ascribed to some obstruction to the passage of food existing in the situation of the xiphoid cartilage. The dysphagia, which was always more severe after taking solid food, was after some time followed by vomiting soon after eating, and which presented a dark brownish appearance. About this time he also complained of severe gnawing pains, at first occupying the epigastrium, but afterwards extending to the right hypochondriac region. These symptoms increased in severity. The vomiting, which was occasional at first, now became constant, and the matter assumed a whitish, slimy appearance. He was greatly emaciated, and a few days previous to admission became jaundiced. His habits in early life had been very intemperate; none of his family, to his knowledge, had been afflicted with any malignant disease.

On examination, after admission, slight hepatic enlargement was detected. There was no irregularity of the integuments, nor could any tumour be observed over the surface of the abdomen. The superficial abdominal veins on the right side were slightly enlarged. The thoracic viscera seemed healthy, with feeble respiration over the right lung.

The jaundice was general, and of a dark green tint. The bowels were obstinately constipated, and the fæces presented a whitish appearance. The urine was of a dark-brown colour, containing bile, and coagulating on exposure to heat. The vomiting and dyspeptic symptoms were considerably relieved by the exhibition of bicarbonate of soda in combination with hydrocyanic acid, but the patient gradually lost flesh, and was attacked with severe pains in his bones, increased on the slightest exposure to cold, so that he could not even bear the clothes to be removed for the purpose of examination. He now suffered from constant vomiting, the stomach being so irritable that nothing but cold tea would remain on it; he gradually sank, and died in a state of syncope, not having had any delirium, convulsions, or coma, his intellect remaining clear up to his death. On examination, the liver was found to be slightly enlarged, of a deep olive colour, its convex surface smooth, but there were some small cancerous deposits in the left lobe; on its under surface there was a large amount of cancerous deposit. The gall-bladder was distended with bile, and the hepatic and common ducts greatly dilated, being pressed on and involved in a large mass of cancerous glands which surrounded them. A large cancerous deposit in the submucous tissue of the stomach surrounded the cardiac orifice, and there was a perforation on the anterior surface of the lesser curvature. The mesenteric glands were in a state of cancerous degeneration. The kidneys and spleen were healthy. On examination of the liver under the microscope hardly any distinct cells were visible; numerous oil globules and irregular particles of yellow and orange biliary matter filled the field, forming a confused mass of amorphous particles.

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[a] Reported by Mr. Andrew Nolan.

This case presents many points of interest: first, as to the diagnosis of the cause of the jaundice; I pronounced from the day of his admission that I considered it a case of retention of bile from the presence of cancerous tumours in the liver, making pressure on either the hepatic or the common duct, and thus preventing the passage of bile into the intestine; this cancerous affection of the liver I considered to be secondary to cancer of the cardiac orifice of the stomach, reasoning from the history and progress of the case, as his complaints were first referable to the stomach, then pain extended into the right hypochondriac region, and finally jaundice appeared. I made the diagnosis of cancer of the stomach from the appearance of the patient, and from the microscopical characters of the matter vomited, which Mr. Ledwich examined carefully with me, and in which we detected oil globules, granular cells with included nucleated cells and a few blood globules, but mostly changed in form; for though the patient stated, that what he had occasionally vomited resembled coffee-grounds, yet the matters vomited while under our observation were not of this character, but appeared to consist of mucus tinged with bile. I may here mention that the colour of what is termed the coffee-ground vomit which is met with in cancer of the stomach, and also of the black vomit which occurs in yellow fever, and in some cases of malignant typhus and other blood diseases in this country, appears to be caused by granules of a dark brown pigment, consisting of the altered colouring matter of the blood, mixed with a number of blood globules mostly altered in form. The enlargement of the liver occurring subsequently to these symptoms, and persisting up to his death, led me to diagnose cancer of that viscus, though, from not being able to detect any irregularity on its convex surface during life, I considered that the disease was seated in the under surface, where it would be most likely to implicate the bile ducts, and the dark green colour of the jaundice confirmed me in this opinion, which the post-mortem examination proved to be correct. I certainly was not prepared to find perforation of the stomach, as he did not present any symptoms during life of that lesion; and as there were no traces of peritonitis, I presume that the perforation must have taken place a very short time previous to his death; besides, from its position being situated in the anterior surface of the stomach, there was no effusion of the contents into the peritoneal cavity, and consequently no inflammation existed. The chief points in this case, however, to which I wish particularly to direct observation are, first, the perfect immunity which the nervous system appears to have enjoyed up to his last moments, as he had neither delirium, convulsions, nor coma, though the system was deeply saturated with at least the colouring principles of bile; and second, the condition of the urine. This secretion was carefully examined by Mr. Leet[a], one of our most intelligent pupils, who furnished me with the following account of his analysis:—

"The urine excreted early in the morning had a dirty brown colour, a peculiar odour, like putrid fish, and formed some hours after emission a scanty deposit, which on being submitted to the microscope presented a few grayish, round vesicles, which disappeared on the addition of ether; some renal and tesselated epithelium, deeply coloured with bile, and some dark granules of irregular form, which dissolved in a solution of potash, (pigment cells). Its reaction to test-paper was strongly acid, and its specific gravity 1·013; 1000 parts yielded on analysis the following:—

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[a] This gentleman obtained the first prize in chemistry given by the Apothecaries' Hall of Ireland.

Water,	969·8
Solid constituents,	30·2
Urea,	8·6
Uric acid,	0·9
Coagulum[a],	7·8
Biliary matter[b],	5·7
Fixed salts,	3·2
Alkaline salts,	2·5
Earthy phosphates,	0·7
Organic matter and ammonia salts,	4·0

The result of this analysis led me to entertain the opinion that the absence of any symptoms referable to the nervous system in many cases of jaundice might be accounted for by the presence of cholic acid in the urine, and its consequent absence from the blood. I was confirmed in this suspicion by the examination of the urine in two other cases of jaundice from retention of bile, recently under my care, and in which Dr. Simpson, Lecturer on Chemistry in the Original School of Medicine, Peter-street, arrived at similar conclusions with regard to the presence of this principle of the bile in the urinary secretion, while there was the same immunity from any affection of the nervous system, though post-mortem examination proved that complete obstruction to the passage of bile from the liver existed. Now, if this supposition be correct, I think that the detection of cholic acid, or its conjugates in the urine, may prove a very important element of prognosis in every case of jaundice, as assuring us against the supervention of cerebral symptoms in cases where it is present, while, if absent, it may put us on our guard, and possibly enable us to adopt a prophylactic treatment. Its presence or absence might also help to explain some of those apparently anomalous cases in which the liver has presented every appearance of the " acute yellow atrophy," so well described by Rokitansky, and yet no cerebral symptoms had preceded the death of the patient; though as a general rule the union of jaundice with cerebral phenomena is mostly found connected with this peculiar condition of the liver. This subject is also of importance with reference to a statement made by Dr. C. Handfield Jones in " Some Observations on the Effects of Cholagogue Medicines," published in the thirty-fifth volume of the Medico-Chirurgical Transactions, in which he states that " the deep colour of the urine in jaundice also seems to depend *solely* on the presence of the pigment; *no trace* of cholic acid is often discoverable. He, therefore, concludes, that " in most cases jaundice results from the absorption into the blood, not of completely formed bile, but of one of its constituents only, viz., the yellow pigment." Professor Lehmann in his Physiological Chemistry adopts the theory " that the components of the bile are not formed in the blood," and in support of this opinion adduces the fact, well-known to every practical physician, that jaundice seldom occurs in disease in the parenchyma of the liver: " certainly never in fatty liver, in the lardaceous liver, nor in tuberculosis of the liver, and but seldom in cirrhosis, or in inflammation of its substance;" so that, if bile can still be formed with all these various alterations of the parenchyma of the liver, it is highly probable that some other apparatus beside the cells has a large share in the formation of this secretion, and would thus tend to support the opinion of Dr. C. H. Jones, that " the bile is not completely formed in and by the hepatic cells; but that this is effected by the action of the ultimate ducts:" for he considers " inaction of the elaborating ducts to be a very common cause of jaundice, the cells becoming filled with yellow pigment because it is not withdrawn from them." This condition of the cells would be an argument against the old opinion, that has been recently put prominently forward by Dr. Henoch, of Berlin, in his late work on " Abdominal Diseases," in which he maintains that in all cases jaundice arises from the reabsorption of bile, both by the veins and lymphatics of the liver, as stated by Saunders many years ago. The last point I shall allude to is the fact of the presence in the urine of renal epithelium tinged with bile, and which I think is of interest, as showing that when from any cause the functions of the liver are imperfectly discharged, so that the bile accumulates in the blood, the kidneys make an effort to eliminate some of the constituents of the bile, and thus some of the renal epithelium becomes detached and is washed away by the urine, in its passage through the tubes of the kidney.

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[a] This substance coagulated from the urine at the boiling point in yellowish-white amorphous flakes, insoluble in water, ether, and alcohol, but readily dissolved by hydrochloric and concentrated acetic acids, giving in these solutions copious yellow precipitates with ferrocyanide of potassium; it was also precipitated from the urine by dilute acetic and phosphoric acids as well as by ether; but no change took place on the addition of nitric acid, solution of bichloride of mercury, or strong alcohol. Again, when heated in the coagulated form with concentrated nitric acid, it produced a deep yellow colour, and with concentrated sulphuric acid an intense blue; the insoluble modification also entirely dissolved in solutions of potash and soda, being again precipitated on neutralization with acids. From these characters it is clear that this coagulum was not albumen, though closely resembling it, but was, in all probability, one of the same class, that is, a protein compound.

[b] This substance was obtained by evaporating a portion of the urine, precipitating the water extract and the salts insoluble in alcohol, with spirit of 0·85; evaporating again this solution, and extracting the residue with anhydrous alcohol, and having expelled the spirit of this solution, the residue was dissolved in a little water, and some hydrochloric acid added, and allowed to digest till this substance had separated itself. It had a resinous appearance, a greenish-brown colour, was almost insoluble in water, but entirely dissolved in alcohol, which solution was distinctly acid, and produced an intense violet red colour with solution of sugar and sulphuric acid when applied in the manner proposed by Pettenkofer; on the addition of nitric acid also it formed a faint pinkish-red colour. From these reactions and others which need not be alluded to, it may be safely inferred that this biliary matter was chiefly composed of the peculiar organic acid of the bile—cholic acid, and a small proportion of its colouring matter—or bile pigment.

The frequent occurrence of *hemorrhages* from the stomach and bowels in cases of cirrhosis of the liver is now so familar to every practical physician that they may be considered as standing to each other in the relation of cause and effect; and we can explain them in a great measure by the mechanical obstruction given to the portal circulation in the liver; but the great influence which other diseases of the liver exercise on the production of hemorrhage generally, has not received the attention it appears to me to merit. Thus we meet with it in simple congestion of the liver, in inflammation, in cirrhosis, and in malignant disease of this organ, so that the mere fact of its occurrence in a doubtful case is of great assistance in making our diagnosis; as, for instance, where the abdomen is greatly distended with fluid, and we are in doubt whether the effusion be ascites depending on disease of the liver, or whether it be a large unilocular ovarian cyst; if the patient has been subject to hemorrhage from the stomach, bowels, or even from the nose, it furnishes strong evidence in favour of the liver being the organ diseased. Now, though in many of these cases we can explain the rationale of the hemorrhage by mere physical causes, yet in others in which we cannot detect any mechanical obstacle to the circulation in the liver, it is difficult to account for it, except on the supposition of a change in the chemical composition of the blood, which we can easily conceive; as, no sooner is the liver affected in either its functions or its substance, than the depuration of the blood is interfered with; in some cases the colouring principles of the bile are retained in the blood, and then there results jaundice, which may occur rapidly, and be accompanied by very serious and fatal symptoms, as in those cases termed "suppression of bile;" or it may supervene gradually, and not be attended with any important symptom, though, according to the recent researches of Claude Bernard, the transformation of albumen into fibrine is but imperfectly effected in these cases, and it is supposed that the separation of fatty matters, and of the acids proper to bile, are also interfered with; as to the sugar, it continues to be formed in the liver and destroyed as usual, for we cannot detect it in the urine; so that, without precisely specifying the parts or the functions of the liver which are affected, we may conclude that the blood is not properly elaborated, but contains certain principles of which it ought to be deprived in the liver; and if this state persists for some time there results a tendency to hemorrhage from the stomach and intestines, partly due to the injury done to the capillary circulation of the liver, and partly to a morbid condition of the blood. In the following case of jaundice, hemorrhage occurred from a different source, and as the case presented some interesting points, I think it may be useful to record it.

John Smith, aged 45, a servant, was admitted into the Meath Hospital in March last, with jaundice, of a dark-green hue: he was greatly emaciated, and complained of pain and sensation of distention in the epigastrium; the liver filled up the right hypochondriac region, where it formed a smooth tumour, tender on pressure; the superficial veins of the abdomen were dilated, but there was no ascites nor enlargement of the spleen. The urine was deeply coloured with bile, and contained cholic acid; the fæces were devoid of bile. He stated that he had always enjoyed good health until last November, when he first began to suffer from dyspepsia, with pain in the stomach; and about three weeks ago he gradually became jaundiced; since that he has vomited blood on one occasion, and has also passed blood from the bowels; he had no fever, but was very heavy and apathetic; there was some dulness with increase of the normal physical signs at the root of the left lung, but no cough nor expectoration; tongue was clean, but dry and fissured. He was put on palliative treatment of taraxacum and soda, his bowels regulated by mild aperients; but the jaundice gradually increased, and he died quietly without any cerebral symptoms. On examination the liver was smaller and softer than natural, but presented a dark olive colour, evidently saturated with bile; there was one solitary cancerous deposit on its upper surface; the gall-bladder and the ducts were distended with bile. The stomach was enormously dilated, its great curvature extending far below the umbilicus; it was filled with fluid the colour of ink, which also distended the intestines; a large chronic ulcer was seated in the lesser curvature, and had protruded the mucous coat. The mucous membrane of the centre of the vertical portion of the duodenum was removed by cancerous ulceration for about one inch in extent, and its place supplied by the pancreas, which formed the base of the ulcer. On microscopic examination the parenchyma of the liver appeared to consist of a mass of broken-up granular matter, tinged deeply with bile, and mingled with oil-drops; scarcely a distinct cell was visible, nor could the lobules be distinguished in it.

The chief points of interest in this case are, first, the effect which the closure of the ducts had on the liver itself, evidenced by the enlargement of this viscus at first, and then its subsequent diminution in size, which was explained by the destruction of the proper secreting cells, which, combined with the pressure of the retained secretion, exerting its influence upon the nutrition of the essential elements of the organ, seems to have occasioned atrophy of the capillary vessels subservient to their secretion; and from these conditions there resulted a gradual disappearance of the secreting cells, and atrophy of the substance of the liver, analogous to the atrophy of the kidney from obstruction of the ureter, so that the cessation of the process of secretion, and the wasting of the capillary vessels, probably render the passage of the blood through the liver less free in these cases, and thus tend to explain the occurrence of hemorrhage. In this case, however, I think the hemorrhage came from the chronic ulcer of the stomach, and the peculiar inky fluid which we found in it was decomposed blood. The great emaciation in this case may be explained by the inclusion of the pancreatic duct, which was confounded in the cancerous mass with the common duct. There is also another point worthy of notice: we found the anterior lobes of the lungs very emphysematous, completely covering the heart, so that it appeared as if pushed backwards by the distended lung, which might account for the dull sound on percussion heard at the root of the left lung, and which I at first supposed might have been due to cancerous deposit in this organ.

I have not alluded to apoplexy of the liver, as it is a distinct form of hemorrhage from the viscus itself: it is a very rare occurrence, and has been well described by Rokitansky in his Pathological Anatomy. A very remarkable case of it was recorded by Dr. Foote in the last number of this Journal.

Art. XV.—*Practical Observations on Syphilis as a Cause of Abortion and Premature Labour*[a]. By Robert Johns, A.B., M.B.T.C.D., L. & F.R.C.S.I., Member of Council of the Surgical Society of Ireland; late Consulting Accoucheur to St. Peter's Parochial Dispensary; Ex-Assistant Physician to the Lying-in Hospital, Dublin; Vice-President of the Obstetrical Society of Ireland; late Chairman of the Midwifery Court of Examiners of the Royal College of Surgeons in Ireland; and Consulting Accoucheur to the Anglesey Lying-in Hospital, &c. &c.

Mrs. H., aged 30, married five years, consulted me on the 17th of February, 1852, under the following circumstances:—She stated that she had brought forth four dead and putrid children: the first a hydrocephalic male, after a natural labour, at the full time; the second a female, prematurely, at the eighth month, the breech presenting; the third, a hydrocephalic male, prematurely at the seventh month, the breech presenting; the fourth, a hydrocephalic male, at the sixth month, the breech presenting. She ceased to feel the movements of each of her children from ten days to a fortnight previously to the advent of labour.

The catamenia first appeared when she had attained her eighteenth year, returned regularly and naturally every month, and continued to do so until her marriage, from which time, for three months, they were very irregular and painful. In consequence of her husband's avocations she was separated from him for eight or nine months, during which period the menstrual secretion was perfectly regular and natural. Immediately on returning to her husband she proved pregnant, and fell into bad health, in which state she continued for the first three months of gestation, but from thence until the birth of her child she enjoyed good health, with the exception of irritation of the bladder causing a constant desire for micturition; and such was the condition of all her subsequent pregnancies. Very early in her first pregnancy she had some white blisters on the labia pudendi for a day or so, but which disappeared without treatment.

This lady had consulted several other medical men, all of whom, considering the unfortunate issue of her labours to have been caused by debility, treated her by tonics, but without success.

At the time of Mrs. H.'s visit to me the following were her symptoms. The menstrual secretion had ceased for three months; she considered herself pregnant; when not so her periods were irregular and painful. There was not any pallor of countenance, but the face was greasy, and covered with spots not to be washed off. She suffered much from giddiness, as if about to fall, accompanied by great fear, but had not any cephalalgia; a sinking feel in the stomach, with much debility and languor; palpitations and other hysterical symptoms; constipated bowels, with flatulence, loss of flesh, appetite, strength, and sleep; darting pains in the breasts under the nipples; dragging diagonal pains from the loins to the pubis; pain in the region of both ovaries; pain and weakness over the sacrum; weight and bearing down in the vagina and in the rectum; enlarged inguinal glands; a greenish, watery, and sometimes a whitish vaginal discharge, very like to the unboiled white of an egg; pain in congress and uterine inertia. On adopting the toucher the os uteri was found patulous, the cervix soft, elongated, otherwise enlarged and insensible to pressure, but not conveying to the finger the idea of the presence of ulceration. The speculum revealed extreme vascularity and inflammation of the os and cervix; an ulcer of the cock's-comb variety covering the entire of the anterior and the greater part of the posterior lip, and extending for some distance into the canal of the cervix, from which cavity issued a tenacious and purulent discharge, slightly tinged with blood; a purulent discharge also was seen escaping from the urethra, which was very much inflamed. The fœtal heart was not audible at this visit, but it was heard occasionally until about a fortnight before labour set in.

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[a] Read before the Surgical Society, 22nd April, 1854.

She was ordered a tonic mixture with iodide of potassium. The acid nitrate of mercury was applied to the canal of the cervix, and to the ulceration on the labia uteri, also a solution of nitrate of silver to the urethra.

22nd February. To have half a grain of the oxymuriate of mercury in decoction of sarsaparilla three times a day; the cervical canal was again touched with the acid nitrate of mercury, and a solution of nitrate of silver was freely applied to the ulcerated surface of the cervix.

25th March. Up to this date Mrs. H. has been taking the mixture just mentioned, which being found to disagree was discontinued this day, the following being substituted for it; one grain and a half of Plummer's pill, and two grains of extract of henbane, every night; and a mixture containing extract of dulcamara and iodide of potassium twice a day. This treatment, together with the occasional use of the before-named caustics to the ulcers, was continued up to their cure (the 5th of June), the mouth having been sore from the 10th of March till that date.

11th June. She was delivered this day of a putrid hydrocephalic female infant, presenting with the breech.

This lady recovered well and quickly of this confinement, and went to the country to recruit her strength, where she remained until the 12th August, 1852, when I was again called to visit her. On that occasion the uterus was again examined, when a great amount of inflammatory engorgement of the os and cervix, together with superficial ulceration, was found to exist.

Blood was taken by the lancet from the os and cervix, and potassa fusa was freely applied to these parts. At the same time she was ordered to rub in one drachm of mercurial ointment twice a day, which treatment (her mouth becoming sore in two days) was continued until the 29th of September, when, as she was too sore to persist with frictions, the following pills were substituted for them: blue pill, a scruple; calomel, five grains; opium, three grains; in six pills, one every night. These kept up the ptyalism until about the beginning of December, when she was pronounced cured. From time to time the potassa fusa and nitrate of silver were used with the diseased womb.

She proved pregnant on the 23rd of December, 1852, enjoyed excellent health during the whole period of gestation, and was safely delivered of a fine, full-grown, healthy, male child, on the 29th of September, 1853.

Mr. H. (this lady's husband) was also submitted to treatment on the 10th of July, 1852. He commenced taking the following pills, it not being convenient to employ frictions, which I very much prefer: blue pill, a scruple; calomel, twelve grains; opium, three grains; into twelve pills, one twice a day. These made his mouth sore, in which state it was kept until the 10th of October, 1852, when an eruption of the nature of acne rosacea came out on his face and neck, but which was removed by the following mixture: extract of dulcamara, iodide of potassium, of each one drachm; lime water, twelve ounces, mix; two tablespoonfuls to be taken three times a day. Of course this couple lived apart whilst under treatment.

This I regard as a very interesting and important case, containing many features of practical utility, whether regarded in a curative or medico-legal point of view, and one requiring a very accurate diagnosis, the accomplishing of which was not without some difficulty arrived at, for the following reasons:—

1. The husband of the lady denied ever having had syphilis in any form, primary or secondary, and stated himself to be in perfect health; and though he was very accurately and minutely examined, not the slightest trace of lues was discoverable.

2. Mrs. H. never had any symptom whatever of the disease, locally or constitutionally.

3. All her symptoms could have been produced by disease of the womb of a non-specific nature. I may here be permitted to state, that I do not recognise any ulcer of the womb as necessarily syphilitic, save the Hunterian chancre, which is very rarely met, indeed I never saw it but twice; all the other affections of the os and cervix which have been laid down as syphilitic have come under my observation in females in whom it was most improbable, if not impossible, that such a taint could ever have existed, and have given way to treatment of a non-specific nature.

The plan of treatment which terminated so successfully here was employed on the following grounds:—

1. Because other means had failed.

2. On account of the order of the premature labours, which I believe to be diagnostic of this disease, as from my experience I conclude that, in the generality of such cases, there is a regularity in their occurrence, either in a retrograde direction, as in the present instance, or in a progressive one, as in most others. For example, a female miscarries at three months, then at four months, and so on up to seven or eight months, when there will be a putrid child, with the skin peeling off, and other appearances so well known as a "pocky" child; then perhaps she may carry the child to the full time, when it will be born either with the disease, when "he who runs may read," or apparently healthy, in which the disease shall appear in some few days, or even in months after.

3. Because, had these arrests of gestation depended solely on the disease of the womb, she should have gone to the full time, as the ulceration was cured before the birth of her last child.

My experience leads me to say that there is but one certain means of preventing abortions and premature confinements in females tainted with syphilis; and that is the use of mercury: but it must be administered to both parents (to the female when not pregnant), and their systems must be kept under the influence of the metal for some time, say for six weeks or two months, or even longer, according to circumstances. In this opinion I am supported by the highest authority. Some agree as to the medicine to be employed, but argue that by giving it whilst the female is pregnant the cure is as certain, and that the child she then carries will be saved. Now from this position I entirely dissent, and I conceive that my view is much fortified by the history of the case before us, for if ever there was one favourable for treatment thus employed, it was it, as the lady was only two and a half months pregnant at the commencement of the first mercurial course. Some treat only the female, which in my opinion is very cruel, and worse than useless, and of this I have met proofs more than once.

Others still recommend iodide and chloride of potassium as a cure, but given only to the female, and when pregnant; but in this I have known several sadly disappointed. There is, however, a class of abortions and premature labours of a non-syphilitic origin, which I have thus treated successfully, of which I shall give an example: Mrs. G., to whom I was called on two or three occasions when she was aborting, afterwards consulted me on the subject, when a raspberry ulceration was discovered on the os uteri, to which caustics were applied twice or three times, and she improved in health; but she gave up treatment before she was well, being again pregnant, when the same state of things recurred. It is rather curious, nevertheless true, that in such cases the aptitude to conceive is as great as that to miscarry. She again proved pregnant, and came to me when a few months so; and having remarked that iodide of potassium and cod-liver oil greatly assisted me in the healing of ulceration of the os uteri in scrofulous patients, I thought the former most likely to benefit her. I therefore ordered her five grains three times daily for six months, at the end of which time she brought forth for the first time a living and healthy child. This medicine has since acted equally well in similar cases, but I must say I have not met with any case of syphilis which I thought safe to commit to the use of iodide, or any other preparation of potassium. A similar remark is made[a] by the late Dr. Beatty, with respect to sulphurous mineral waters and goat's whey, in his paper on this subject, where he was the first to point out to the profession the true means of cure.

Another important feature in connexion with this subject obtrudes itself on our notice, and one which, from its tendency to have a baneful influence on society, I think ought not to be passed over in silence. It is a well-established fact that in cases like Mrs. H.'s, it is not unusual for a number of small, raised, moist excrescences, or ulcers, to appear on the female genitals, which fact, I need hardly say, will naturally cause, at the least, much anxiety to both wife and husband, the former being conscious of her innocence, and the latter equally so,—he and his medical adviser believing himself to have been cured of the disease for months previous to his marriage; and unless the surgeon be in a position to satisfy all parties as to the real nature of the case, the result is obvious; and woe be to that man's reputation if his diagnosis be incorrect, as thereby he may ruin the character of an innocent and unsuspecting female, and cause disunion in families hitherto united. But I believe that, happily for the lady's reputation, the question is easy of solution, as thus:—The sores are of a secondary nature, and are not discoverable on the husband, for they do not infect him, by whom she was poisoned, not by a primary sore, but evidently through the medium of the semen,—one of the proofs that the same stock of infection cannot return on itself.

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[a] Fourth volume of the Transactions of the King and Queen's College of Physicians.

The late Mr. Colles noticed this fact:—" Among the secondary symptoms some raised ulcers shall fix upon the external pudenda of the wife, the husband shall very rarely suffer in any manner from them."

Professor Porter in his Lectures held the same doctrine, and used to give the following extract from the Lectures of the late Mr. Hewson:—" For a long period back I have been in the habit of noting the cases of many married women who, for a succession of years, have been attending the Meath Hospital, bearing pocky children, and repeatedly subject to secondary chancres; and yet when I have examined the husbands, I have not been able to trace a symptom of lues, either local or constitutional. From these observations, if confirmed by the experience of others, we might, perhaps, infer that the same stock of syphilitic poison does not infect the same individual more than once, or, if reconveyed to him, that it is innocuous." The late Dr. Beatty alludes to this same fact.

As few doubt that syphilis is communicable by other means than connubial intercourse, I shall not now enter into the full consideration of it, but shall merely allude to that part of the subject as far as relates to the infecting of or by newly born children. I believe now-a-days it is familiarly known that a pocky child will disease a healthy wet-nurse, and that a diseased nurse shall disorder the child at the breast; but I am of opinion that such conveyance can only take place through the medium of a crack or ulcer in the baby's mouth in the one case, or on the breast of the nurse in the other. I never heard of a well-authenticated case of a child being poisoned by the milk of a syphilitic nurse.

I fully concur in the following opinion of the late Mr. Colles, having tested its accuracy:—"It is a curious fact that I have never witnessed, nor ever heard of an instance in which a child deriving the infection of syphilis from its parents has caused an ulceration on the breast of its mother."

Professor Porter again says:—"I may observe that I never yet met with a case in which the infection of a child could be distinctly and unquestionably traced to the suck of the nurse. But a very short time since I met with an instance where a woman contracted chancres on the breast from suckling her sister's child, although both its father and mother were apparently well, and the infant's mouth free from any appreciable crack or sore. Such cases as this are by no means infrequent, yet I imagine he would be a bold reasoner who should presume to deduce from them that the saliva of the child was really capable of communicating the poison: for my own part I could not entertain such an opinion; but although I may not admit the contaminating power of the saliva, the suck, the perspiration, yet facts (and I reason only on facts) have come to my knowledge, which prove, at least to my understanding, that another important animal secretion possesses this unhappy quality, and that in the mysterious process of generation, the female may be contaminated without the intervention of a single drop of purulent matter."

Some assert that the female cannot be poisoned directly through the semen, but that she is so affected through the medium of the fœtus in utero. Although this theory may appear very plausible, nevertheless it is not correct, for I have more than once seen the disease where it could not be otherwise contracted. Many similar cases are recorded, and some have never been pregnant.

Professor Porter mentions the case of a lady who was poisoned by her husband by secondary infection, when she was three months pregnant.

Mr. Colles, in speaking of a husband being infected by his wife who, in her capacity as wet-nurse, was diseased by a child, makes the following remark:—"I must here remark that my observation does not supply me with an instance of the husband's having contracted the disease by sexual intercourse, except when ulcers had formed on the pudenda of the nurse." May not the fact of all this lady's children (but one) having been hydrocephalic bear out the idea of the connexion between syphilis and scrofula.

Before concluding it may not be out of place here to make a few passing remarks on the treatment of pocky children; but I believe now-a-days it is conceded by all practical men, that the only certain cure for the disease is mercury, yet there is some difference of opinion as to the preparation, and its mode of administration,—some giving it only to the child, others to the nurse, each, I should say, from my experience, being occasionally disappointed. Some employ frictions, others blue pill and the more active preparations of this medicine. I much prefer the hydrargyrum cum cretâ (being more manageable), which I give to the child in six-grain doses two or three times a day, according to the extent of the disease; and I pursue the ordinary adult treatment with the nurse at the same time, and by this means I am generally successful. I conceive that such treatment is less likely to produce purging, convulsions, and such like in the child, than the more energetic preparations. In some cases mild local applications, as black wash, &c., are useful as adjuvants.

As this disease remains for some time in the system of the child after it has been apparently cured, I continue my treatment at longer intervals, and in smaller doses, for some months after such a result. Some years ago I had a child, I think for nearly twelve months, taking hydrargyrum cum cretâ, on which it seemed to fatten. She is now a fine healthy girl of eleven years of age. She was prematurely born at eight months, and the disease appeared about ten days or so after birth, when I first saw her. Her mother had previously brought forth many dead and putrid children, commencing by abortions, and advancing regularly up to eight months; after one of her confinements she had been put under a course of mercury by another medical gentleman, but it was of no avail, as her husband, who was still diseased, was not subjected to treatment. This lady had secondary ulcers on the genitals, but did not infect her husband. Eventually this gentleman and lady were put under a course of mercury by me, and the issue was a fine healthy child, now about eight years old.

From these cases I would draw the following deductions:—

1. That secondary syphilis is not curable in the pregnant female.

2. That mercury is the only certain means of preventing the abortions and premature labours depending on syphilis.

3. That both parents must be submitted to this treatment.

4. That as the disease in such cases exists in the secondary form, the system must be kept under the influence of the metal for at least six weeks, and in some cases even longer.

5. That syphilis is communicable to the female through the semen of the male, without the presence of any ulcer or purulent discharge.

6. That secondary ulcers on the female genitals do not infect the male by whom she was contaminated, so long as he is poisoned by the infection which gave it to her.

7. That as syphilis is communicable from a child to its nurse, and *vice versâ*, great care ought to be taken that an infected child be not given to a sound nurse, nor a pocky nurse be hired for a sound child.

8. That syphilis in infants is only curable by mercury, which is best given directly to the child, as also to its nurse.

9. That there is no disease of the uterus, save the Hunterian chancre, which is pathognomonic of syphilis.

10. That the order of the abortions and premature labours is a very good test of their cause.

11. That ulceration may exist to a great amount on the os and cervix uteri, and not be discoverable by the toucher.

12. That the patulous state of the os uteri, induced by inflammation, may be present during pregnancy.

13. That children dying in the uterus from syphilis, like those dying from other causes, are thrown off within a fortnight or so after the cessation of vitality.

14. That there is a class of abortions and premature confinements preventible by iodide of potassium and similar medicines.

ART. XVI.—*Aneurism of the Common Femoral Artery cured by Compression; with Remarks.* By MAURICE H. COLLIS, M. B., Surgeon to the Meath Hospital, &c.

THE cure of external aneurism by compression has been the subject of so many memoirs during the last few years that, in the opinion of some, the subject is hackneyed and exhausted. That such a conclusion is, to say the least, hasty and premature, will, I think, be evident from the particulars of the case which I now propose to put upon record. The deductions which may naturally be drawn from it show that there are aspects of this great improvement in modern surgery which require to be further studied; and it is extremely probable that such investigations will result in the application of this mode of treatment to a more extended class of cases.

In the present instance compression was applied close to the sac, and appears to have acted in a different manner and on a different principle from what has hitherto been claimed for it. According to the highest authorities upon this subject, the artery has always been found pervious at the seat of pressure, when opportunities of post-mortem examination have occurred; and the sac has been found filled with concentric laminæ, which seem to be successive deposits from a current of blood circulating through it; consolidation of its contents *en masse*, as a result of stagnation, is regarded as improbable, and would be thought dangerous and liable to cause relapse or suppuration. Now, in the case reported below, it will be found that, in consequence of pressure being applied close to the sac, no branches being given off between it and the point of compression, the sac was consolidated with rapidity; and, of necessity, not in concentric laminæ; and the artery was filled up as high as the next collateral branch: these results were obtained by the rapid formation of a coagulum without the occurrence of inflammatory action at the compressed point; nor were they followed by suppuration of the sac or secondary aneurism. This coagulum occupied, as far as we could judge, the entire space in which the current was interrupted, that is, the space between the branches given off above and below the point of pressure. If further observation should prove that this is not an isolated and exceptional case, it guides us to a new principle, which may be applied not only where the aneurism is situated as this was, but with certain limitations to pressure upon the distal side.

The details of the case are as follows:—

Christopher Toole, aged 32, by trade a nailer, a tall, athletic man, of dark complexion, presented himself among the extern patients at the Meath Hospital, on Monday, July 24, 1854, with a pulsating tumour on the upper part of the right thigh. This tumour was 4¼ inches long, and 5½ wide; the circumference of the limb over the centre of the tumour was 21¼ inches, that of the corresponding part of the sound limb being 18½. It occupied the upper part of Scarpa's space; its upper margin was in contact with the depression which marks the position of Poupart's ligament, and it extended downwards along the course of the common and superficial femoral vessel. The pulsation was very strong and diastolic, and the action of the artery above it was so forcible as to lead some persons to conclude that it was considerably dilated; by pressing upon the abdomen firmly we could trace the pulsation in the external iliac for a distance of nearly four inches. The superficial veins of the thigh were remarkably large, knotted, and tortuous; the glands in the groin were somewhat swollen; and upon the outer aspect of the tumour two glands could be felt elongated and flattened, and partially sunk into it; the entire limb was enlarged, slightly œdematous, but of natural temperature and sensibility. There appeared to be some solidification of the tumour on its outer margin: subsequent observation showed this to be at least partially deceptive, and resulting from the varicose condition of the veins on the internal side. Pressure upon the artery in the groin readily checked all pulsation, but without any sensible effect upon the volume of the tumour. No bruit de soufflet was audible in any position, nor was there any fremissement; the whole arterial system was excited, and the man complained greatly of the throbbing; even the momentary pressure of the thumb upon the artery gave him great relief. He stated that his general health was good, and that for the last two years he had been temperate; his occupation rendered stooping necessary, and also constant rotation of the body at the hips, the feet being kept unmoved. The floor of his workshop was uneven, and his right foot had for some weeks rested habitually on a lower level than the left. The tumour made its appearance, as far as he was aware, spontaneously, about six or seven weeks before his application at hospital: it was then about the size of a nut, and had ever since grown steadily larger.

Tuesday, 25th.—After administering purgatives, &c., compression was attempted; various instruments were tried, by none of which could the artery be commanded, even partially, for more than a minute or two. The only point available for pressure was just above the sac, at the spot where the epigastric and circumflex vessels are given off. As the brim of the pelvis is rounded just at this place, all the instruments were displaced by the ordinary respiratory movements, and slipped off the artery; a relay of pupils kept up pressure sometimes by the finger and sometimes with the clamp or leaden weight; but it was partial and irregular, in spite of the greatest vigilance and anxiety on the part of all, including the patient himself. Low diet was strictly enforced, and purgatives of croton oil were occasionally exhibited. Quiet was procured by opiates. Chloroform was administered once, but produced excessive headach. An attempt was made to draw some blood upon the second day, but it was thick and carbonaceous, and would not flow. On Saturday, after upwards of four days' ineffectual attempts at compression, the skin in the groin began to chafe and suppurate round the root of every hair, and it became evident that pressure could not be borne much longer; the aneurism had increased half an inch outwards and downwards, and the pulsation was as violent as before, compared with the general force of the circulation; no attempt at consolidation had taken place, and all parties were inclined to be disheartened.

On Sunday, the 30th, I determined to make another effort to command the vessel completely. Having procured a double clamp tourniquet, which closed by a screw at the hinge, I applied it, placing a small roll of bandage an inch thick under the pad. I screwed it home, and found that it controlled the pulsation for a moment, and, like all the rest, slipped off towards the abdomen. By screwing it a little tighter, and drawing it downwards by a tape from the knee, I was enabled at last to get the artery completely controlled. Before finally adjusting it in this position, I drew up the skin, so as to get an unchafed part under the pad. The tourniquet was not disturbed for thirty hours, and at the end of this time, upon slackening it, all pulsation was found to have ceased in the tumour and in the artery as high as it had been traced before, namely, to the spot where the common iliac bifurcates.

About twelve hours after the tourniquet was applied the man felt a stinging pain on the inside of the knee and leg, and a kind of tingling sensation along the outside of the hip and thigh. While under pressure he took a couple of sedative draughts, containing half a drachm of chloroform.

The spot of skin where pressure had been first attempted was beginning to slough in points, but in a few days it became healthy. The tumour became a little smaller in the first few days, although the subsidence of venous congestion and œdema gave it a more prominent appearance. He never had the smallest pain nor single bad symptom after the removal of the clamp, and upon the 12th of August he got up and walked about the ward.

On the 16th he left the hospital, and returned almost immediately to his work, having been in hospital twenty-three days; nor would it have been necessary to keep him so long but for the slough of the integument caused by the first abortive attempt at compression. I saw him on the 6th of October, and found the tumour reduced very considerably in volume; the difference between the circumference of the two limbs was less than one inch.

In the mere details of this case there is little worthy of remark beyond the rapidity and painlessness of the cure, and the fact that it is the first instance on record of the cure of aneurism of the common femoral artery by compression. There are, however, some points of general interest to which I wish to draw attention. These are:—

First. The position of the point of pressure as regards the sac and as regards the collateral branches. The artery was compressed close to the sac; the point of pressure covered the usual origin of the superficial circumflex ilii and epigastric vessels, the latter of which could be felt pulsating before treatment was commenced; hence the nearest collaterals were practically the internal iliac on the one side, and the profunda on the other, and pressure was thus made between the sac and one of the next collateral branches.

Secondly. The fact that under these circumstances the aneurism increased in size, as long as pressure was incomplete, and upon the artery being completely controlled coagulation was rapidly obtained.

Thirdly. The simultaneous blocking up of the artery above the point of pressure, as high as the next collateral branch.

Fourthly. The non-occurrence of secondary aneurism, or of suppuration of the sac.

Fifthly. The bearing of this case upon the question of pressure at the distal side.

The immediate proximity of the point of pressure to the sac appeared to be a dangerous though unavoidable complication; it was, however, not only unavoidable, but essential to the cure. As but one point existed where pressure could be made, it was necessary that the cure should be rapid, or the skin would have failed us. Ignorant of the principle which appears to guide the cure in pressure close to the sac, we at first were satisfied with endeavouring to cut off the impulse of the heart without completely shutting off the current. As long as we did so the sac continued to increase in size, and to pulsate with as great a vehemence as ever. No sooner was the current completely intercepted from the sac by pressure between it and the nearest collateral, than coagulation of its contents took place. No current through the sac was now practicable, and the consolidation was, as we must suppose, not only rapid but complete. In compression at a distance from the sac, as in ligature similarly situated, blood is deposited layer by layer, until not only the sac but the artery at the injured part is filled up. No such process could have occurred in this case, for no branch existed between the sac and the point compressed, and therefore no current could have made its way through it. The effect of thus converting it into a *cul de sac* was the coagulation *en masse* of its contents. The same result took place in the *cul de sac* above the tourniquet, the artery becoming obliterated in a similar rapid manner. To this latter circumstance is probably to be attributed the non-occurrence of relapse or of suppuration in the sac.

This case seems to suggest the possibility of curing aneurism by distal pressure, under favourable circumstances. If we can effect the consolidation of an aneurism by converting it into a *cul de sac*, there is reason to believe that with due regard to preparatory treatment this result might in some cases be obtained by choosing a spot between the sac and the distal collateral branch as the seat of pressure. We see in this case that not only the sac was filled up, but the artery also, which was exposed to the pulsatile wave of blood. When pressure is made on the distal side of an aneurism, we observe an increase of impulse for a few moments. If the compression is *complete, and firmly kept up*, this momentary irritation subsides, and the aneurism pulsates with perhaps less force than before. This principle of converting the aneurism into a *cul de sac* appears to act occasionally in compression at a distance. Dr. Carte, who has had great opportunities of observing the various phenomena which arise during the cure of aneurism, has stated it to me as his conviction that many, if not all, of the rapid cures are effected by a loose clot blocking up the distal portion of the artery. Certainly we can scarcely conceive it possible that a cure which occupies seven, ten, or even thirty or forty hours, could be effected by the slow process of a deposit, layer by layer, until the sac is filled. We see, also, that a similar result has been obtained purposely by manipulation of the sac, a process which is too dangerous to be other than exceptional in application. From all these circumstances, therefore, I think we may infer the probability of distal pressure being occasionally useful; it is at least worth a trial, where the position of the sac prevents our using the ordinary method; and if we can get a point for compression between the sac and the nearest collateral branch, I think the result of the case which I have now put upon record will give us encouragement, although indirect, to hope for success.

Art. XVII.—*Some Experiments on the Proportion of Carbonic Acid exhaled in Phthisis Pulmonalis.* By A. G. Malcolm, M.D. Edin., Physician to the General Hospital, Belfast.

In 1843 I published the result of some experiments performed in the Fever Hospital, Belfast, as to the per-centage of carbonic acid exhaled during respiration in typhus fever. This paper appeared in the January Number of the London and Edinburgh Monthly Journal of Medical Science. The experiments were performed by means of an apparatus which was essentially the same as that used by Dr. Prout, and described and figured by him in Thomson's Annals of Philosophy, vol. II. The manner of using the instrument, and, indeed, the entire mode of conducting the experiments, I have fully detailed in the paper referred to. I shall not, therefore, allude now more particularly to this point further than to mention the principle upon which the amount of carbonic acid is ascertained. Caustic potass, when brought into contact with carbonic acid, instantly and completely forms a chemical union. The air expired, which is to be examined, is put into a glass globe containing 100 cubic inches, with a graduated stem. After the addition of the potass to this measured quantity a reduction takes place, in consequence of the combination referred to. The space thus vacated becomes occupied by the water which is introduced afterwards, and its amount may then be read off on the graduated stem. This amount, however, needs correction, as it has been calculated by Dr. Prout that at least one-tenth per cent. should be allowed for the absorption of carbonic acid.

Since the date of that paper I have instituted similar experiments to ascertain the proportion of carbonic acid exhaled in cases of phthisis. I was anxious to contrast the relative amount of this excretion in diseases alike characterized by quickened circulation, innutrition, and augmented temperature, though very different in other essentials. It is well known that cases of phthisis, especially when the stage of softening has been reached, progressively emaciate, though the appetite may be not merely unimpaired, but much increased,—while, on the other hand, the emaciation of fever is proportionately synchronous with the complete anorexia which obtains in fever. In the former case the carbon of the food is not deposited in the usual adipose receptacles, neither is it carried off by any excessive evacuations,—it must, then, one would suppose, disappear with the cutaneous or pulmonary excretions. *A priori*, then, I was led to anticipate an excess in the proportion of exhaled carbonic acid. In the case of typhus fever I ascertained that a very considerable diminution in this proportion occurred, which I ascribed to the fact, that as a minimum quantity of carbon is taken into the system, and as that contained in the tissues of the body was required for the maintenance of temperature, so little combustion of carbon is necessary, and, therefore, little carbonic acid should appear in the expired air; that little, however, as it is rapidly formed and parted with, tends to augment the temperature of the body above the natural standard.

Viewing the matter in another aspect, we might be induced to consider that the quantity of carbonic acid would be very much reduced in phthisis in consequence of the pathological obstacles to a free interchange of gases through the respiratory membrane, and which obstacles must become increased with the increase of the disease. Pathologists have now ascertained, beyond all doubt, that tubercle is deposited in the air-cells, as well as parenchyma of the lung, and is, therefore, in contact with a large proportion of the surface of the respiratory membrane. In advanced cases this proportion must be, perhaps, equal to 90 per cent. Under these circumstances we must arrive at the conclusion, that either the respiratory changes take place through the diseased membrane equally with the healthy, or that they are limited to the latter. We have no evidence, however, that these respiratory changes can occur under the former condition, and it hence does seem natural to suppose that the inaction of the greater portion of the lung would lead to a diminution in the quantity of carbonic acid expired.

If, then, it can be shown that no decided relative diminution takes place, we cannot forbear from coming to the conclusion that the oxidation of carbon in the system is going on to a greater extent in cases of phthisis than in persons in health. In order that there might be no mistake as to the normal proportion of carbonic acid in the performance of these experiments, I was not satisfied with taking for granted the correctness of Dr. Prout's average, though it might be supposed that, as I had employed the same apparatus, I might have done so with perfect safety; but, as it might have occurred that these experiments were not performed under precisely the same circumstances as those of Dr. Prout, I considered it more judicious to ascertain an average, which, though it might not be precisely the estimate of any other observer, would better answer my purpose, as it would be the result of experiments performed under exactly similar conditions as regards the mode of respiration, the ages and condition of the parties operated upon, the time of day, and period of the year, all which have more or less influence.

The mode of respiration adopted in these experiments deserves mention. In phthisis the vital capacity of the lungs is small, the respiration short, and the amount of air changed, much below the average. Vierordt proved, from the result of 170 experiments, the important influence which differences in the rapidity and depth of breathing exercise. The per-centage of carbonic acid decreases in general with the frequency of the respirations, and increases in proportion to their depth. I, therefore, endeavoured in these experiments to arrive at what might be considered a medium result, and operated upon the air expired in three to five respirations, and instituted the same regulations in the experiments with the healthy. In short, the manner of breathing in the two instances was precisely the same; and if any difference were possible, it would refer to the vital capacity which varies so much in different individuals, and especially in this disease as compared with health; for it is evident that a smaller vital capacity, *cæteris paribus*, must be attended with a diminished per-centage of carbonic acid.

Experiments like those whose result I am about to submit have been as yet conducted upon a limited scale. I shall here mention the results of the few observations which have been as yet instituted. Nysten, in his researches, came to the conclusion that the proportion is increased in the early stage of acute fevers, and diminished in obstructions of the lungs. Jurin stated as his opinion, that the cold stage of fevers diminished, while the hot stage increased, the amount of carbonic acid; and the combined observations of Lavoisier and Seguin generally corroborated these conclusions. Andral and Gavarret, 1843, in many experiments observed an increase in cases of amenorrhœa in pregnancy and after cessation of the menses. Hannover, 1845, noticed an increase in chlorosis and a diminution in phthisis. Macgregor, 1843, observed an increase in measles, small-pox, and cutaneous diseases. While Hervier, 1849, noticed an increase in the phlegmasiæ; with the exception of cases of inflammation of the heart and lungs, in which, as also in such diseases as impede the action of these organs, he observed a diminution; he observed a diminution also in the exanthemata, during suppuration, scurvy, purpura, typhoid fever, dysentery and chronic diarrhœa, anemia, anasarca, syphilis, cancer, scrofula, and the last stage of phthisis.

It will be seen from this enumeration that there is considerable difference of opinion as to the influence, for example, of the exanthemata and the phlegmasiæ; and further, two observers have distinctly stated that there is a diminution of the proportion in cases of phthisis; one of these, however, restricts this opinion to the last stage of the disease. It is difficult to reconcile these various opinions, and indeed it is not to be wondered at that so great a variety should exist in disease, when it is known that as much, if not greater, variety has been observed in experiments instituted to ascertain the healthy standard. These remarks furnish another reason in favour of the plan I adopted in experimenting at the same time, and under the same circumstances, upon the healthy and diseased.

The present series of experiments was performed in the summer months of 1853, and between the hours of 11 A.M.

and 1 p. m., which corresponds with the period ascertained by Dr. Prout to furnish the maximum proportion, and they were performed upon individuals at an average age of twenty-five; an age which corresponds to the average proportion. On the other hand, the high temperature of the season exercised a counterbalancing effect to the diurnal influence referred to.

The influence of diet, medicines, and other external agents, it would be needless to particularize here, as it cannot have a close bearing upon the question.

I shall now detail some of the circumstances connected with the subjects of the experiments.

Fifteen patients, nine males and six females, in decided consumption, were operated on thirty-two times; their ages averaged twenty-one years, and ranged between fifteen and thirty; their average height was 5 feet 4½ inches, and ranged from 4 feet 10¼ to 5 feet 10¾; their average weight was 116 lbs., and their vital capacity a fraction above 100 cubic inches, which is about 100 less than that laid down in Hutchinson's Tables. The disease had reached the stage of softening in all but one, and in three there were cavities. The average duration of illness, up to the time of examination, was ten months; hemoptysis had occurred in all the cases but two, and in several repeatedly. I noticed the purple line on the edge of the gums in all but two; the pulse averaged 104, and the respirations 30. The physical evidence of phthisis was unmistakable, and is detailed in the Tables. The result of the experiments in these cases was this: the per-centage of carbonic acid averaged 4·467, and ranged from 3·7 to 5·5.

For comparison with these, I operated upon twelve healthy individuals, six males and six females, at an average age of 29, an average weight of 146 lbs., an average height of 5 feet 6 inches, and an average vital capacity of 180. The result of the experiments upon these showed an average per-centage of 4·6916, ranging from 4·2 to 5·9.

It may be said that these results do not contradict the statements of Hannover and Hervier, as there is a diminution to the extent of two-tenths per cent.; but it must be remembered how different the condition of the lungs in these two sets of cases. The vital capacity, for example, was diminished by one half, whereby a considerable diminution might be expected of the carbonic acid in air submitted to examination; and secondly, the existence of extensive disease of the respiratory membrane must have tended still further to diminish the proportion, were it not for the circumstance which I think is deducible, namely, a superabundance of carbonic acid in the blood, which is thrown off by the healthy residue in nearly equal proportion to what is exhaled in the perfectly healthy respiratory apparatus. Taking these things into consideration, I do not see what other conclusion we can arrive at.

If, then, it should be ascertained by subsequent experiments that this view is correct, and I freely admit that further observations are desirable (more especially the results of a comparison between the influence of tubercular and pneumonic induration), I can perceive how important the fact would be in laying down the pathology of phthisis. Ancell, Bennett, and other recent writers, are of one mind as to morbid blood being the essential feature in tuberculosis, and as to the fact that this condition may exist an indefinite time prior to the deposit of tubercular matter. An examination of the blood itself has hitherto failed in identifying this predisposition state. Might not, then, the examination of the expired air supply at least a link in the diagnostic chain? This is one practical point; there are others in connexion with the theory of animal heat, and metamorphosis of tissues, upon which this subject impinges, and upon which it might be particularly interesting to dwell; but, considering the limited character of these observations, I shall content myself with merely submitting the subject to the notice of the profession, with the hope that some more competent, or with better opportunities, may test the view I have here advanced.

TABLE I.—*Showing the relative Amount of Carbonic Acid exhaled in Health.*

No.	Sex.	Age.	Weight in lbs.	Height.	Vital Capacity.	Per-centage of Carbonic Acid in Expired Air.	Temperature.	
				F. I.			Air.	Water.
1	M.	27	192	5 10	240	5·9	63	61
2	M.	23	162	5 6⅞	200	4·7	63	60
3	F.	30	154	5 3¼	156	5·1	63	61·5
4	F.	30	153	5 3½	120	4·6	64	61
5	F.	31	124	5 1¾	150	4·3	63·5	61·5
6	M.	33	. .	5 11¾	196	4·5	61·5	60
7	M.	22	. .	5 10	250	4·25	61·5	60
8	M.	58	126	5 6¾	120	4·8	62	59
9	F.	22	. .	4 10	125	4 25	64	62
10	F.	34	111	5 3	152	4·45	67	62
11	F.	16	134	5 2½	170	4·2	63·5	61·5
12	M.	22	154	6 0½	280	5·15	63	61
Average, .		29	145·5	5 6	180	4·6916	63·25	61·71

TABLE II.—*Showing the Relative Proportion of Carbonic Ac*

No. of Patient.	No. of Experiments.	Sex.	Age.	Occupation.	General Appearance.	Height.	Weight in lbs.	Vital Capacity.	Stage of Disease.
						F. I.			
1	4	M.	21	Hackler, . . .	Pale, slight, . .	5 8	. .	. .	Softening, .
2	2	M.	30	Moulder, . . .	Sallow, ...	5 5½	. .	90	Softening, .
3	2	M.	20	Foundry, . . .	Pale, thin, . . .	5 9¾	. .	130	Softening, .
4	2	M.	22	Ship Carpenter,	Sallow, thin, . .	5 10¾	134	116	Softening, .
5	2	F.	17	Weaver, . . .	Fair, ...	5 3⅜	100	110	Softening, .
6	2	F.	23	Mill Girl, . . .	Sallow, thin, . .	5 0	. .	100	Softening, .
7	2	F.	22	Servant, . . .	Sallow, thin, . .	4 10¼	. .	65	First stage, .
8	3	M.	30	Turner, . . .	Pale, thin, . . .	5 4	134	140	Softening, .
9	2	F.	30	. . . .	Thin, ...	5 2½	107	103	Softening, .
10	1	F.	19	Servant, . . .	Clear Complexion,	5 3¼	. .	100	Cavity, . .
11	2	F.	15	Mill Girl, . . .	Sallow, ...	4 11¼	100	85	Softening, .
12	2	M.	17	Mill Boy, . . .	Thin, ...	5 2¼	91	82	Softening, .
13	2	M.	16	Mill Boy, . . .	Thin, ...	5 4½	119	105	Softening, .
14	2	M.	24	Bricklayer, . .	. . . .	5 10	151	100	Cavity, . .
15	2	M.	18	Printer, . . .	Feeble, ...	5 7½	105	82	Cavity, . .
Mean,			21			5 4½	116	100½	

exhaled in Phthisis Pulmonalis, with other Points of Interest.

Time ill.	Complications.	Hemoptysis, when occurred.	Diarrhœa, when occurred.	State of Gums.	Pulse.	Respirations.
10 months,	Diarrhœa, . . .	April, 1853, . .	Since September, 1852.	Purple line,	120	24
14 months,	Laryngitis, .	1 year since, . .	Never, . . .	Purple line,	84	24
3 months,	Diarrhœa, . . .	Never, ...	Last 12 weeks,	Spongy, . .	92	28
5 months,	Ulcers of neck, .	Last April, . .	None, ...	Faint line, .	96	33
2 years,	Pleuritis, . . .	1 year ago, . .	Never, . . .	Slight red line,	132	32
2 years,	Dyspepsia, . . .	1 year since, repeatedly,	None, . . .	Purple line,	90	30
10 months,	Diarrhœa, . . .	Oct., 1852, and occasionally,	All winter, . .	Purple line,	120	30
8 months,	Laryngitis, . .	6 months since, and occasionally,	None, ...	Purple line,	140	28
12 months,	Amenorrhœa, .	Tinge, 3 weeks ago,	2 months ago,	Broad purple blush,	112	30
2 years,	Amenorrhœa, .	2 months ago, .	3 months ago,	Purple margin,	108	40
9 months,	Emansio, . . .	6 weeks ago, . .	None, ...	Purple line,	120	34
5 months,	Diarrhœa, . . .	4th July, and since,	2 months ago,	Purple line,	114	28
4 months,	Mesenteric disease,	2 months ago, .	15 months, .	Full, pale, .	108	24
. . . . . .	Abscess, ...	Mixed blood and pus,	Diarrhœa, repeatedly,	Purple line,	100	32
9 months,	Pleuritis, . . .	None, ...	3 weeks ago, .	Purple line,	108	30
10 months.					$103\frac{3}{5}$	$29\frac{4}{5}$

Table II.—*Showing the Relative Proportion of Carbonic Aci*

No. of Patient.	Tongue.	Menses.	Axillary Circumference.	Infra-mammary Circumference.	Sterno-spinal Diameter.	Right Apex to Spine.	Left Apex to Spine.	Right Apex Movement.	Left Apex Movement.	Percussion Note.
1	Clean, red,	. . . . . .	31½	31	6·625	5·1	5·125	10	10	R. apex dull,
2	Furred, .	. . . . . .	32½	30½	6.875	5·5	5·5	.	.	No change,
3	Clean, .	. . . . . .	33	32¼	6·75	5·25	5·125	10	15	R. apex dull,
4	Clean, .	. . . . . .	36	35½	7	5·25	5·625	.	.	R. apex dull,
5	Clean, .	Twice in last 2 years,	28¾	28	5·875	4·625	4·5	.	.	Clear, . . .
6	Clean, .	3 or 4 times annually,	31	28¾	7	4·875	5·5	5	20	R. apex dull,
7	Clean, .	Scanty, . .	30½	26½	6	4·562	4·75	3	5	No change, .
8	Clean, .	. . . . . .	35	31¼	8	5·375	5·375	5	7	R. apex flat,
9	Clean, red,	. . . . . .	30	28¾	6·75	5	5	8	10	Clear, . . .
10	Whitish,	Absent, . .	28¼	27	6·375	4·5	4·25	25	28	R. apex less resonant, .
11	Clean, red,	Absent, . .	27½	25	5·625	4·375	4·25	20	12	L. apex dull,
12	Furred, .	. . . . . .	26	28	6·75	4·25	4·25	10	5	No change, .
13	White, .	. . . . . .	27	27	6	4·25	4·25	10	5	Clear, . . .
14	Clean, .	. . . . . .	33½	33¼	8·5	4·375	4·81	10	10	R. apex dull,
15	Slight fur,	. . . . . .	31½	30	5·75	5	4·75	20	12	L. apex dull,

xhaled in Phthisis Pulmonalis, with other Points of Interest.—Continued.

Auscultation.	Per-centage of Carbonic Acid.	Temperature.		Dietary.			Other Particulars.
		Air.	Water.	Breakfast.	Dinner.	Supper.	
Coarse crepitus,	3·8	65	60	Tea and bread,	Potatoes and milk,	Meal and milk,	Debility, anorexia, perspirations.
L. apex, crepitus,	4·2	61½	58	Tea and bread,	Potatoes and fish,	Tea and bread,	Debility.
Crepitus,	4·175	61	59	Bread and milk,	Potatoes and milk,	Meal and milk,	Gastrodynia.
Clicking râle,	4·55	61½	60	Tea and bread,	Potatoes and milk, and fish,	Tea, bread, and milk,	Chills and heats, good appetite.
L. apex, crepitus,	5·1	62½	60½	Tea, bread, and milk,	Tea and bread,	Potatoes and milk,	Debility, perspiration, emphysema.
Clicking râle,	4·7	63	61	Tea and bread,	Potatoes and buttermilk, or stirabout,	Tea or stirabout,	Chills and heats, debility.
R. apex, less R. M.	4·25	64	62	Tea and bread,	Beef and bread,	Tea and bread,	Chills and heats, anemia, gastrodynia.
Clicking râle,	4·03	64	63	Tea and bread,	Beef and bread,	Tea and bread,	Debility, anorexia, and perspirations.
L. apex, clicking rale,	4·3	63	61½	Tea, bread, and eggs,	Bread and milk,	Tea and bread,	Chills and heats, dyspepsia.
Pectoriloquy,	4·0	63	61½	Tea and bread,	Beef, or potatoes and milk,	Tea & brown bread, or stirabout,	Chills and heats, dyspepsia.
Clicking râle,	4·45	64	61	Tea and bread,	Beef, potatoes and milk,	Stirabout and milk,	Chills and heats, dyspepsia.
L. apex, crepitus,	3·7	64	61½	Bread, milk, and eggs.	Beef and bread,	Stirabout and milk,	Perspirations.
L. apex, clicking râle,	5·1	. .	. .	Tea and bread,	Potatoes and milk,	Tea and bread,	Temperature high.
Clicking râle,	5·5	.	. .	Tea and bread,	Potatoes, ham, or beef,	Tea & brown bread,	Epistaxis frequent, chloasma, perspiration.
Clicking rale,	5·15	58	56	Tea, bread, and ham,	Bread and ham,	Tea & bread, stirabt., ham,	Chills and heats, palpitation.
	4·467						

Art. XVIII.—*A Sketch of the Recent Outbreak of Cholera at Finglas.* By Charles F. Moore, M.D., Surgeon in the Peninsular and Oriental Steam Packet Company's Service.

In attempting to describe the visitation of an epidemic, some account of the locality in which it occurred seems to me to form an essential part of the description. I shall, therefore, endeavour to give a brief view of the general topographical features of the village of Finglas. It is situated in a small valley on a branch of the classic Tolka, about two miles and a half from Dublin, on the Drogheda road, lying about north-west of the Irish metropolis. The village stands on limestone rock, for the most part on the sloping sides of the vale, the main street being, at its northern end, 194 feet above the sea. Several parts of the village command a splendid prospect of Dublin city, bay, and mountains, and naturally it has great advantages as a healthful place; but what nature has bestowed on this classic spot man has marred by neglect and carelessness. Thus the site of William the Third's camp, the vicarage of the poet Parnell, and the place where Swift, Addison, and other equally celebrated men frequently met together, has become little better than "a refuge for the destitute," the vagrant, and the bad characters of many a mile round, and a nidus for disease.

Before alluding to the circumstances connected with the first appearance of cholera in Finglas, I shall make some observations on outbreaks of the epidemic in other places, prefacing my remarks by stating, that I consider the apparently capricious selection of certain houses, sides of streets, &c., which are generally held up as proofs of the inscrutably mysterious workings of this fearful malady, are not so in fact, for on close investigation I have never yet, in any part of the world which I have visited, failed to discover palpable causes for the too often merited infliction of the scourge of cholera or other epidemic[a]; nor can I avoid observing that cholera would be of great use to the well-being of a country if its occasional visitations were remembered so as to induce Governments, local powers, and the people, never to relax industry in sanitary measures, which ought constantly to be enforced, to prevent the more frequent, and therefore less observed, fatality from fever and other preventible diseases.

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[a] Besides the valuable evidence on this point given by the late Dr. Graves, Drs. Arnott, S. Smith, Cowan, Brown, Pringle, and others, I may add the statements of Dr. Hunt, of New Orleans, as to the local causes of Yellow Fever during September of this year, in that city. (See New Orleans Medical Journal, No. xix., p. 331.)

Without entering on the question when cholera first appeared in India, on which so many opinions are held by various authors, it may be stated that the general character of the Delta of the Ganges, commonly supposed to have been the birthplace of the disease, is that of an extensive swampy flat, very slightly elevated above the bay of Bengal, and the waters of the many large rivers which discharge themselves into the northern extremity of the bay. This level country abounds with luxuriant vegetation, the decaying matter of which, exposed to a tropical sun and the damp atmosphere of the rainy season, renders the climate extremely unhealthy during the greater part of the year. We cannot wonder, therefore, that cholera is endemic during many months of every year in the dirty and crowded native town or suburbs of Calcutta, situated in a district such as I have described.

The remarkable and fearful fatality of the disease in the town of Suez six years since, where it is said 1700 persons died in a population of 3000, calls for a notice of the predisposing causes at work in that desert town during the few weeks of the prevalence of cholera there. A recent visit to Suez enabled me to make inquiries of some of the authorities of the place as to its state at the time, and I had an opportunity of noting the features of the locality, its inhabitants, &c.

The town consists of some substantial modern buildings, some very old and dilapidated khans or inns, and a number of habitations crowded round the bazaars, which are generally thronged with people of many nations, not over cleanly in their persons; this most thickly inhabited part of the town is close to the cemetery, a large piece of sandy ground, partly surrounded by the town wall, through broken portions of which jackals and hyenas find a ready entrance.

Suez stands on a low promontory, with a large extent of flat beach, partly dry at low water; some salt-water lakes under the walls add to the depressing influence of the exhalations from the beach; foul cesspools under most of the houses, and the extreme heat of the sun's rays, rendered more powerful by reflection from the heated desert, with the total want of fresh water, which is only to be had of good quality from Cairo—ninety miles distant,—that from Joseph's and Moses' wells, seven and ten miles distant, respectively, being brackish,—contributed to render Suez unhealthy during part of the summer and autumn, and raised the mortality from cholera to the extraordinary amount above mentioned.

The deaths were so numerous, and succeeded each other with such extraordinary rapidity, that the hasty burial the bodies received formed no protection against the ravages of the hyena and jackal, who speedily strewed the ground around with the remains of the dead dragged from the graves. The town became quickly deserted by all who could afford to leave, and this circumstance, perhaps, served to prevent a still further loss of life.

It would not be just to the spirited commercial Company whose fine steamers traverse the Red Sea, in connexion with others in the Mediterranean, to allow the reader to remain with so terrible a picture on his mind of Suez, the port of embarkation on the Red Sea of the overland route to India, without giving a sketch of what has been done for his comfort by that Company (the Peninsular and Oriental), and the enterprising rulers of Egypt. A spacious hotel has been erected, and is well supplied with, I might almost say, every luxury of modern times, while the steamers are provided with ice from the Wenham Lake, and an ample supply of the best meats, fruits, and vegetables, of India and Ceylon, and wines, &c., from Europe.

Cairo suffered less severely from cholera than either Suez or Alexandria, attributable, I think, to its more elevated and drier situation, though its mean annual temperature exceeds that of either of the other towns. I was in Alexandria when 300 were dying of cholera daily, out of a population of about 65,000. This city is built on a low sandy plain between Lake Mareotis and the Mediterranean; each house encloses within its walls a large cesspool; the lower classes, who suffered most from cholera, live on water-melons and gourds part of the year, and dwell in wretched huts. As in Suez, many of the better class fled the town. In no case have I heard of cholera appearing on board any of the ships of the Company mentioned above, though one of their vessels was constantly lying for days in the harbour; however, notwithstanding the overland passengers had crossed Egypt, several cases of diarrhœa only occurred on board, which fortunately being taken under treatment[a] in time, in no case merged into cholera.

In Malta harbour several cases occurred on board a line-of-battle ship, lying opposite the spot where a foul sewer flows into the sea.

I have invariably found that cholera shows itself in the most crowded and least ventilated parts of a ship, and observed, more than once, when off coasts where cholera prevailed, that our ship's companies suffered from diarrhœa, cramps, &c.,

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[a] This applies to the homeward-bound vessels only, not to those going to India, of which I have no information at this period.

though we were from thirty to sixty miles distant from the shore at the time. A dense fog, with almost perfect calm, rendered the air on one occasion, in the month of August, very raw and uncomfortable; this was off the coast of Portugal, in 1851; we had 33 cases of diarrhœa in three days, some attended with severe symptoms, cramps, vomiting, fainting, vertigo, &c., in our company of some 170 persons. On reaching Gibraltar we learned that what the Spanish Government called a severe form of diarrhœa prevailed at Cadiz, while cholera was stated by the French press to exist on the opposite coast of Africa.

In the Medical Times and Gazette, September, 1854, there is a graphic account of the cholera in the fleets off Baldjik. The writer states that man is able, by neglecting proper precautions, to render the most naturally healthy place extremely unhealthy; thus he states the putrefaction from the remains of beasts slaughtered for the use of the fleet had produced severe diarrhœa, occasional cases nearly resembling cholera; but on the arrival of French troops, who, after losing several thousands in the interior, washed their clothes and persons in a stream which supplied the allied fleets with water, confirmed cholera broke out with violence amongst the allied fleets. The arrival of the French and their ablutions took place on the 7th and 8th, and the cholera burst out on the 9th and 10th August.

I would here draw attention to an observation of the talented author of "Mayfair to Marathon," where he states, "near a large town in Touraine is a small cemetery wholly set apart for victims of cholera, on the rational grounds that, as so very little is known of the nature and origin of the mysterious disease, it might be dangerous even to disturb the graves of those who died of it lest it should return." The writer goes on to mention a circumstance which came to his knowledge in the East:—"In 1830, some persons died of cholera, and their clothes were buried, for fear of contagion, in a common cesspool; some years after, this had to be cleared out, and the disease returned and carried off many."

I have above mentioned that during the prevalence of cholera at Alexandria, our crew and passengers escaped the cholera : it must be stated, however, that, although we were obliged to have several labouring men from Alexandria on board during our sojourn in that harbour, our own men were not allowed on shore except the officers and one boat's crew who were employed carrying a wounded officer from the ship.

Diarrhœa was common enough amongst our people on the homeward voyage, and were it not for the facilities of getting the cases under early treatment, might have ended in cholera. Our passengers passed round, not through, the Egyptian cities affected with the epidemic.

On a subsequent occasion cholera prevailed in Malta, and one of our men having imprudently eaten of bad apples, was attacked with the disease, and died in six days after of consecutive fever; at this time all communication was prohibited by the quarantine laws then in force in Malta.

In 1849 cholera was severe in Southampton,—the port of departure of the Peninsular and Oriental Company's steamers. Several of the crew of the ship I then belonged to were affected with the disease, and one or two died in Southampton. Several cases of diarrhœa occurred on the outward voyage, and three of severe cholera; these, however, recovered; they all occurred in the most crowded and least ventilated parts of the ship.

To return to the consideration of the present epidemic at Finglas. I find the first case[a] of cholera was a labourer who had just returned from Belfast, and became ill after drinking a gallon of porter and eating a liberal supply of bacon for his breakfast. This was on August 13th ; he recovered, but shortly after two cases occurred in the same house, in children, one of whom died on the 20th August.

The disease continued in the village with some remarkable intermissions, until the 24th September, when another period occurred of three days without any new case; since that time, however, several persons have been attacked with the disease. The number of cholera cases recorded to the 24th September, from its first appearance on the 13th August, was 66, of which 28 proved fatal. The greatest mortality occurred on the 16th, when 5 died ; on the 17th, 6 persons were carried off; and on the 18th, 4 cases terminated fatally.

It is said about 100 persons fled out of the village on the 18th and 19th, of whom it was ascertained 5 died within a few days, one in Liverpool, and the others in the environs of Dublin. Some of these refugees were the means of conveying the disease to another locality favourable for its development, where in a few days twelve persons died out of a very small number of inhabitants: the cottages composing the hamlet (Kill of the Grange) being badly ventilated and dirty, and the drinking water very indifferent.

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[a] I am indebted to Dr. Hill, Medical Inspector, &c., for the facts of the first appearance of the disease in Finglas.

The house in which the first case occurred in Finglas is one of two stories high, very old, without rere,—owing to another house being built against its back wall on very much higher ground than the wretched clay floor of the front house; the first person attacked lay upon a straw bed on the ground, near the street door, close to which is an opening broken into an old foul sewer. The drinking water used by the villagers is chiefly taken from the nearly stagnant stream which I have mentioned before, and which, like the Thames and Liffey, receives the filth of the village and the drainage of the adjoining ancient and still constantly used cemetery. Two wells, in a very dirty state, were also in use as sources of water-supply at the time of the outbreak of cholera in Finglas; I am happy to add, however, that the local authorities, having their attention drawn to these and other matters, commenced remedying the evils before I left the locality.

It is unnecessary to particularize each house in which the disease appeared, as in every case there were strong predisposing causes, which, by lowering the standard of health, rendered the inhabitants more predisposed to the disease, which I consider contagious, though in a degree far less so than typhus fever, small-pox, scarlatina, or measles. I would not have it supposed that I at all advocate measures of quarantine, with its obstructiveness and grim paraphernalia, as a means of preventing the spread of cholera; the only true prophylactics being attention to drainage, ventilation, cleanliness, proper drinking water and food, employment for mind and body; and, should the disease unhappily appear, confidence in, and the early recourse to, medical aid in the premonitory or diarrhœa stage.

At Finglas I observed, as in other affected localities, that whatever the first predisposing cause may have been,—whether a pigsty in a dwelling for humanity; the drainage of filthy back premises trickling into the house or cabin, the ground floor of which was some feet below the back premises aforesaid; or excessive crowding, with bad ventilation, as seen at a midnight visit by my colleague in Finglas, Mr. W. H. Bourne, where he found eleven persons in a small damp cabin, with only one room, five adults and six children, two of the latter affected with diarrhœa, and five of the inmates lying in one bed, one of them ill with cholera; or the predisposing causes may have been food, bad in quality and deficient in quantity; the abuse of ardent spirits; proximity to a graveyard or an open filthy sewer; all superadded to the use of drinking water loaded with decaying animal and vegetable matter; or moral degradation;—the contagion became apparently increased in proportion to the intensity of these predisposing causes; and if the person attacked with cholera was not speedily removed to the hospital, or the other inmates of the house greatly diminished in number, the disease quickly spread. Thus in each of two houses, under the influence of several of the causes above named, four persons died within a very short time.

On the other hand, by strict attention to ventilation, cleanliness, good food, sufficient clothing, and avoiding over-fatigue, the attendants of all classes in our hospital escaped the disease, though many, both medical officers and nurses, had attacks of diarrhœa, or sharp colicky pains, while several of the patients became affected with other complaints—showing the general tendency of a depressing nature, of what may be called a cholera atmosphere.

It seems that almost total immunity may be reckoned on by attendants on cholera cases, provided they can have sufficient rest in good air, good food, perfect cleanliness, and cheerfulness; and that they are not compelled to remain too long in near proximity to the cases.

In the hospital at Finglas we had, during the day, all the windows open, good fires in each room, and strict attention to cleanliness; while the scale of diet allowed the nurses and porters was liberal, and included a small allowance of spirits each evening.

General Remarks on the Cases at Finglas.

Several of them did not present any decided blueness: a degree of lividity coming on, however, in general some hours before death. A few of the worst cases exhibited deep blueness from the first. The genuine cholera aspect may be apparent without blueness of a decided character.

The derivation of cholera (*χόλερα*, a waterspout), given by some authors, denotes forcibly its most leading and most constant symptoms.

In the early stages of cholera a clean tongue, slightly redder than natural, is not uncommon; as the disease advances, its temperature falls; and should the case last, and become one of consecutive fever, the tongue presents a deep brown or black coating, in some cases very dry and hard. Intense thirst is a very common symptom: and I have always considered, in satisfying calls for a constant supply of drink, that suited to each case should be given only in small quantity, say from a teaspoonful to a tablespoonful every fifteen minutes.

As in fevers, patients require "to be fed," in the words of that late celebrated physician, Dr. Graves; so it seems to me the same rule is applicable to cholera.

A drowsiness or stupor, attended with coldness supervening in the extremities, and the pulse becoming imperceptible, should not be mistaken for natural sleep, and demands immediate attention. If opium had been given in such a case, the danger is greatly increased. Stupor, and tendency to cerebral congestion, is often augmented in cholera by the injudicious use of stimulants.

The suppression of urine and bile, or retention of the latter in the gall-bladder, with coldness of the surface, and cold, clammy perspiration, are symptoms requiring unremitting attention.

Cessation of vomiting and purging often precedes death.

The length of time patients may live, after collapse has been well marked, is often very extraordinary. Thus a woman (T.) and her two children, about four and seven years of age, lived several days after passing into this state. Frequent frictions with stimulating liniments, hot bottles, and flannels, shampooing, enemata of brandy, yolk of egg, milk, &c., and small quantities of food, as beef-tea, water, rice-water, milk, &c., by the mouth, also inhalations of oxygen gas, which seemed useful for a time at least, and small doses of diffusible stimulants, apparently prolonged the vital powers; and the mental faculties, though much oppressed, enabled these patients to recognise their medical attendants. Small doses of mercury, with chalk, were also given in those cases, but without any effect on the secretion of bile; these and many other persons were not under treatment until after collapse had occurred.

Constant friction to the extremities and shampooing, with small doses of calomel or gray powder, frequently repeated, often seem to change the rice-water stools to those of a bilious character, with a return of natural warmth to the surface, and of the secretion of urine. In such cases danger from the cholera stage of the disease may be considered over, and the consecutive fever will not generally be severe. This appears often, however, to be in proportion to the quantities of opium, stimulants, and mercury given during the earlier stages of the disease, much of the two former tending to cerebral congestion, while the latter, if too long continued, tends to reduce the powers of life, and in some instances to produce sloughing of the mucous membrane of the bowels.

Dr. Ayre is entitled to credit for having drawn the attention of the profession to the value of small doses of calomel frequently repeated in cholera.

A marked case of the evil of giving opium in cholera occurred in the person of A., a fine, muscular man of twenty-five years of age, but a very dissipated person. No account could be got as to any early diarrhœa, and when first seen, I found him greatly excited with drink, and vomiting and purging rice-water egesta most profusely. He was taken to the hospital, the vapour bath and other remedies were applied, and calomel and opium given internally; unfortunately, grain doses of opium were administered to the amount of three or four grains, one having been given every hour. The manifest effect of this was deep coma, coldness of the surface, lividity, &c. On learning the apparent cause of this change, for I had not prescribed the opium, I had the man treated as for opium poisoning, viz., a cold wet towel dashed on his temples, and friction, shampooing, and pinching of the extremities, employed. When this had been continued for a considerable time, the insensibility went off, and the natural colour returned; however, the patient lived for only forty hours after, sinking with well-marked head symptoms.

The vapour bath I allude to above was invented by Mr. Browne, the apothecary connected with the North Dublin Union. It consists of two hollow vessels, which, when filled with hot water, and placed one above and the other below the patient, who is wrapped in blankets, form a case around him, —acting very powerfully in restoring heat to the surface; it can be very easily removed when desirable, without exposure of the invalid.

S., a case of cholera, a lad twelve years old, had left Finglas six days before to avoid the epidemic, but while staying with his friends on the north side of Dublin he had eaten largely of plums, and was taken with purging and vomiting very early on the morning of the 22nd September; he was then sent to his parents in Finglas. When I saw him he was blue, his skin cold, and the pulse at the wrist not perceptible; he had suppression of urine, and vomiting and purging of a rice-water character. This lad, in common with several other children of the village, was subject to lumbrici. The treatment consisted of small doses of mercury with chalk, and at night a little James' powder with it, constant frictions, sinapisms, &c.; a teaspoonful or two of milk and water, rice-water, &c., every fifteen minutes. The small doses of gray powder acted as a sedative, in a marked manner, in this case.

September 23rd. The pulse has not returned at the wrist, nor has any urine been secreted for twenty-seven hours; however, he has had only two rice-water stools, and two attacks of vomiting for several hours. The mercury has now been discontinued for some time, and only one dose is to be given at night; should vomiting return, four grains of nitrate of bismuth is to be administered, and gallic acid in three-grain doses, should purging return.

September 24th. Head symptoms commenced with heat of skin and a perceptible and accelerated pulse; ordered occasional doses of calomel and gray powder, and these at night with James' powder; also a blister to the back of the neck; small quantities of nourishment to be continued.

September 25th. Symptoms improved; the pinched cholera expression of the features almost entirely gone; in the evening he passed water with freedom, and in so copious a stream that the attendants thought the jar of hot water had been broken. The suppression of this secretion had lasted three days and a half. The patient called for beefsteak, and on the following day continued improving rapidly.

September 22nd. Saw W., a case of cholera, a young woman twenty-three years old, in comfortable circumstances, as was the last-mentioned case; the apparent predisposing cause in this instance being crowding in an ill-ventilated though otherwise clean house, where a lad had already died of the disease. In the young woman's case the cholera aspect was apparent, though blueness was not well marked; the other symptoms were coldness of the surface, pulse scarcely perceptible at the wrist, suppression of urine, rice-water vomiting and purging. These symptoms had, as in all the other cases of which I could ascertain the previous history, been preceded by diarrhœa; gray powder was ordered every hour, sinapisms, frictions, external heat, and small quantities of rice-water, &c., every fifteen minutes.

September 23rd. Pulse, 120; tongue coated with yellowish fur. I found she had taken two ounces of whisky this day, which I desired should not be given again; to continue mild nourishment, as milk and water, rice-water, &c., as before described. She complained much of thirst. The vomiting had ceased, and the purging was much diminished; however, a tendency to cerebral symptoms was already slightly perceptible.

September 24th. Head symptoms having become strongly marked, a blister was applied to the back of the neck, and at night a dose of mercury with chalk and James' powder was ordered.

September 26th. The case has steadily improved since last report; the secretions have become normal; the voice has assumed its natural tone, and the disinclination to think or speak, which accompanies some stages of this remarkable and fearful disease, has now passed away.

A case of ordinary autumnal cholera presented some severe symptoms; the chief distinctions were the presence, more or less, of the bilious colour in the stools throughout the attack, though whitish particles were present in the otherwise entirely fluid stools; in short, had it not been for the presence of a yellow tinge, the evacuations would have been quite those of cholera; collapse never took place, though an approximation to that state was evident. The pulse was not imperceptible at the wrist, nor was the genuine cholera cold perspiration present, nor the peculiar countenance or disagreeable odour of a cholera patient, although the man, thirty years of age, had suppression of urine for thirty-six hours. He recovered without head symptoms.

The causes of cholera seem to be a certain aërial[a] influence and local predisposing circumstances[b], or other lowering agencies acting upon man[c]; to these may be added in many instances[d] contagion.

The local predisposing causes, which, when combined with the aërial influence, so called by Dr. Shapter, are capable of producing cholera, under other circumstances may give rise to yellow fever, typhus, intermitting or remitting fevers, dysentery, or the eruptive fevers, according to climate, locality, &c.

There is an immense amount of evidence to prove that diarrhœa always precedes cholera.

The vast importance of treating this premonitory stage of cholera cannot be over estimated.

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[a] See Dr. Shapter's graphic work on Cholera in Exeter, in 1832.

[b] As malaria, the emanations from foul sewers, bad ventilation, with overcrowding, &c.

[c] Bad food and water, cold, excessive fatigue, anxiety, fear to a certain extent. That mental influences are of secondary importance in predisposing to cholera may be gathered from the fact that the disease has been general and fatal in the Belfast Lunatic Asylum, and also in the Richmond Lunatic Asylum, Dublin.

[d] For recent experiments on the influence of the contagion of cholera on dogs, see Edinburgh Medical and Surgical Journal for October, 1854.

Cholera once developed requires a treatment varying with the symptoms, but, as a general rule, opium and stimulants are injurious, owing to the tendency to cerebral congestion.

In some rare cases of strong persons, of a full habit of body, bleeding has been of great use, partly by relieving the system (may it not be ?) of urea not eliminated by the kidneys.

The indications in cholera seem to be to restore the natural secretions of the liver, skin, and kidneys.

Small doses of mercurials, as frequently repeated as necessary, with or without antimonial powder, and with friction, warmth, and counter-irritation, have been found useful, apparently by restoring the natural action of the organs mentioned in the last paragraph.

Remedies ought to be given as much as possible in powders, or in a fluid form, as pills are less acted on by the enfeebled powers of the stomach. Pills, some not at all acted on, and others scarcely altered, were found by my late colleague at Finglas, Mr. W. H. Bourne, in the stomach of a female who died of cholera.

Light drinks, as water, plain or iced, milk and water, rice-water, &c., should be given in small quantities frequently; and, if necessary, nourishment by enemata.

When mercurials have been given in large doses or in small quantities for too great a length of time, fatal depression of the vital powers often supervenes.

The tendency to cerebral symptoms in the advanced stages of cholera demands constant attention.

In convalescence from cholera, great care should be paid to diet.

Art. XIX.—*Some Notes on Cholera in London.* By Charles Kidd, M. D., Member of the College of Surgeons, London, Member of the Surgical Society of Ireland, &c. Kingsland, London.

There are some few circumstances connected with the late outbreak of cholera in this metropolis which may interest the readers of the Dublin Quarterly Journal. Ireland has happily, to a great degree, escaped; but we should all be still taught by the enemy, under whatever shape or in whatever place he may covertly make his appearance.

Without going into any historic survey of the early origin or progress of this fell disease, points which, it is too plain, have rather distracted attention from its more immediate "prehistoric" relations to the common, every-day facts of want of drainage, defective sanitary arrangements, &c., I think it may be useful to refer to a few of the opinions and views held here by those who have seen most of the disease. It is obviously on the surface of all our archæological and older views of the history of cholera, that we have been looking too much for one specific cause of the disease, and, by a like mental process of reasoning, for one specific cure,—we have perhaps been abusing the usefulness of the inductive method of Bacon; and because cholera has occurred under one series of observations or inductions, as to ozone, microscopic spores, pipe-water, electricity, the route of armies or peoples through the Deltas, and by the channels of rivers, from the Ganges to the Alma,—that therefore this or that one cause, or some other one cause, must be looked upon as the sole and simple solution of the mystery of the occult nature of cholera. I have had the advantage, at University College, of hearing Dr. Carpenter lately demolishing this great error. Our streets and lanes, and to which he might have added our lower classes themselves, in their reeking and filthy gin shops, are all "primed and loaded" with the combustible and putrescent materials of cholera: in other words, there are several zymotic causes in daily operation, but needing only the spark to produce explosion and scatter destruction around. Of these various causes, so familiar to the more thoughtful reader, such as want of drainage, and want of elevation above or below high-water mark in rivers, which Mr. Farr believes holds a direct relation to the rate of mortality, at least in London,—without going into the unnecessarily vexed question of contagion or non-contagion,—there is one set of causes of cholera, I think, which has been very much overlooked, namely, organic disease. I have watched with some care during the last two months eight or nine hundred cases of cholera in the chief London hospitals, and the general impression the disease has left on my mind is, that chloroform selects with not less fatal certainty in organic disease its cases of deaths than the poison of cholera; and too often, where our best concerted medical arrangements are of no avail, we are fighting, not with cholera, but with organic disease.

I have been confirmed in this view by a recent Report of the physicians of New York, who state that seven-eighths of those examined after dying of cholera in America had old-standing organic diseases. These diseases, at both sides of the

Atlantic, have been indeed chiefly connected with the heart, liver, and respiratory apparatus, embarrassing the system in collapse, and preventing it shaking off that incipient death in the blood which, under one shape, we call collapse,—in another, consecutive fever. The blood in cholera has a curious tendency to collect in the capillaries of the surface, and can be scarcely recognised by any difference,—that in the arteries from that in the veins. Drunkenness is said to be also a fertile source of cholera; and this Dr. Carpenter explains, on physiological grounds, from its impeding respiration. But if we say, this fearful vice among the working classes leads to organic disease, we get, in my opinion, nearer the real source of the evil. At one of the smaller of the London hospitals, the Middlesex, an abrupt outbreak of cholera occurred; in one week a certain specific locality, immediately around Regent-street, having received, as it were, a double dose of the mephitic poison from some sewerage arrangements, showing, perhaps, that one or two causes may be escaped, but not *a third;* thus we must not look for one sole cause, in fact, or one antidote, but many. Dr. Carpenter seems to think, however, that as in fermentation of malt, where there are about half a dozen conditions to be observed, if we carefully destroy any one, the remainder are useless, so it is in cholera.

I am not going, even if I were able, to describe with any minuteness the sad and wearying scenes witnessed lately at the London hospitals by a few individuals: those cases of advanced collapse which sadden and sicken the heart of even the most careless medical attendant, where nothing can be done—where patients are brought in cold, living but lifeless, with pinched and skeleton features, whispering husky voice; the capillaries congested; skin leaden-coloured, clammy, and sodden; cramps and vomiting; eyes sunken; breath cold. Some of the stoutest-hearted were quite unmanned by these scenes—men like Dr. Addison, Dr. Bailey, Mr. Simon, and others. Not that cholera itself is such a mystery, but that it is a mystery at all, and not more generally understood; and, like a fire, that it is not quenched in its first outburst as choleraic diarrhœa. It is quite clear we have the essentially surgical character of our medical education in England to blame for much of our popular ignorance of typhus and typhoid fevers, scarlatina, erysipelas, cholera, &c. Dr. Stokes has done good work by explaining so forcibly as he has done this all-pervading and frightful source of error. It is gratifying to find, however, that judging by the rate of mortality, at least in the best hospitals, we have rather gained ground in the present epidemic.

It is not devoid of instruction to compare the views held as to cholera. In the last attack of 1848 the College of Physicians of London at the time distributed the following circular as to its contagious character:—

"Cholera appears to have been very rarely communicated by personal intercourse; and all attempts to stay its progress by cordons or quarantine have failed: from these circumstances the College, without expressing any positive opinion with respect to its contagious or non-contagious nature, agree in drawing this practical conclusion:—that in a district where cholera prevails, no appreciable increase of danger is incurred by ministering to persons affected with it, and no safety afforded to the community by the isolation of the sick."

The Irish Board of Health of the day also published a somewhat similar notice, in which, after "mature consideration (they) do not advise that cholera should be met by a system of hospital accommodation such as needful in fever," but rather a system of dispensary or house-to-house relief, so as to meet the disease earlier. I believe this the more useful method of the two, as now generally practised. From what I have already seen of the present epidemic, and from conversing with the physicians attached to the various London hospitals, it can be no longer doubted that cholera, if not a contagious disease, is certainly capable of being imported into a district, and that persons coming into the district are more liable than the others; these views have long been held by Copland, Graves, and Watson. It would be very wrong, for instance, as done at the Middlesex Hospital, to introduce cholera patients into the ordinary medical wards of an overcrowded hospital or infirmary, if it could be avoided; as there would be a danger of other patients taking on the choleraic diathesis, like hospital gangrene, though in large airy hospitals the same cases might resist it as they would fever. The patient in the next bed to a cholera case might also have constitutional power to resist the disease, but it would be a question whether, as in scarlatina, but, of course, in an infinitely less degree, the air of the ward would not become quite poisoned, and other patients be seized. No one can tell when, for instance, the infinitely attenuated poison of scarlatina or puerperal fever will leave the walls or rooms of a ward; in the same way the poison of cholera, if aided by foul drains, old timbers, dissecting-rooms, or the tidal overflows, as in Bermondsey, near Guy's Hospital, has a tendency, as illustrated by deaths out of doors, to increase to a certain point in such districts. Even in the London hospitals I have observed, whether from the crowding of the beds and wards, the unavoidable accumulation of fæcal matters and rice-water vomit; the dead carried out, yet lying more or less in the ward, or various other causes, I cannot specify,—a sort of uniformity in the cases, after being in hospital. The patients chiefly at St. Thomas', Guy's, University College Hospital, and St. Bartholomew's, seem to like the care and attention shown them in hospital, and very many who were recovering owed their escape to the most assiduous nursing,—to the skill and anxiety displayed by both the physicians and nurses.

This question of the advisability of admitting patients in cholera, collapse, or choleraic diarrhœa, into hospitals, is one which has been argued with much learning at both sides, and is always open to discussion at such societies as the Epidemiological; but in the present epidemic the difficulty has been partly surmounted by discriminating those cases which are likely to be improved out of doors, and those by hospital treatment; and more particularly by the quiet but efficient assistance afforded by every one, physicians, clinical clerks, students, &c., to do the best they could for as many as could be accommodated. To many of the cases at St. Bartholomew's and St. Thomas', at the latter particularly, small doses of calomel, means for promoting warmth, constant jars of hot water to the feet, salines, a mustard emetic, and rest, with perpetual nursing, were equivalent to rescuing the patient from the worst form of collapse,—here no mere question of contagion, though it may instruct a society, or the chances of a mild case getting worse, should prevent our doing the best we can. Let us give the patient the benefit of the doubt, but in a different sense from what theory might suggest.

It is interesting to remember the relative number of deaths from cholera in different districts of London, according to the position above or beneath the average level of the city. The latter is, in round numbers, forty feet above Trinity high-water mark. We must remember that the drainage of two and a quarter millions of people must, as a general rule, collect more or less in the places lower than this level. We, in fact, can scarcely expect cholera at Hampstead; and can just as easily understand its being perpetual, if possible, in Millbank Penitentiary, or some of the south districts about Bermondsey and Guy's Hospital, or opposite the Tower. Some of the north districts are 135 feet above high-water mark; the south district, on an average, only six feet: and any one who will take a boat to Hampton Court, when the tide is in, will see Millbank Prison completely sunk under the steamer as he sails by. Drainage, to all intents and purposes, is impossible. Of the first 1200 deaths in the present visit of cholera, 817 occurred in the low-lying districts; 62 in the higher localities. It would be interesting to compare these facts with the results in other towns: parts of Edinburgh, for instance, are very high; of Clifton near Bristol; Tunbridge Wells; Folkstone; Madrid; while Berlin, on the contrary, is very flat; Paris and Dublin are also something alike, parts flat and parts lying high, though it is doubtful if there is anything in Dublin so bad as the Island or Cité in Paris, where stands the Hôtel Dieu; the sewerage of Paris is, however, managed in some mysterious way, so that the river is never polluted, for we can almost see the bottom shining through the water as we cross the bridges. In London we have a vested interest in pollution of the river, in commissions of sewers, and, I am sorry to say, in the stereotyped ignorance of the public in sanitary and other medical matters.

The outline of a few cases may not be uninteresting.

At Guy's Hospital some very bad cases occurred, 101 in all, of which exactly half died. Salines, soda water, and infusion of mint, were much used here; the external application of heat, or huddling the patient up in a lot of hot blankets, did immense good. Some of the cases were peculiar,—fever and rheumatism. One was the case of a young woman who came in with rheumatic fever and pericarditis: it was very singular, the pericarditis friction sounds all vanished during the cholera, and the case ended in a curious measles-like eruption. In three cases in this hospital the operation of transfusion was tried, but failed to produce any effect. The cases occurring in patients already under treatment for other diseases were all in a new building, quite a model hospital, leading one to think that dampness is a conductor of the cholera influence. Some of the best medical officers of Guy's Hospital seem satisfied cholera is contagious.

At St. Thomas' Hospital, there were 133 cases, and about 50 deaths. John Wilson was admitted into this hospital on September 14th, in a state of advanced collapse,—blue. He was ordered an emetic of ipecacuanha at once, with hot-air baths, ice, beef-tea, and soda water. On the 15th he was given creasote to stop the vomiting; and on the 16th, brandy. He recovered. This patient was one of five or six others of the very worst kind, who were treated on the plan of hot-air baths, brandy, and ice *ad libitum*, which they seemed to enjoy very much. Dr. Goolden inclined to leave his patients to nature and to the sedulous action of the hot air.

J. Crawley came in also in a similar state, on September 15; extreme collapse. Emetic as in the previous case, hot-air baths, creasote. 16th. Enema of beef tea, ice, soda water, and good nursing to keep up the heat of the body. After trying various modes under the practised skill of Mr. Simon and Dr. Bennett, the general impression in all seemed to be to leave the patients to this plan of encouraging and coaxing reaction.

At St. Bartholomew's there were 300 cases; the rate of mortality being the same as in St. Thomas'. Thomas Parrot was admitted into this hospital, under Dr. Bailey, on September 7th, at half past 11 o'clock; a dustman, his habits good and temperate; he complains that he has had diarrhœa for three days; evacuations liquid and white, urine scanty; cramps frequent; skin sodden with clammy perspiration; voice husky; eyes sunken; lips cold; breath cool: in a word, all the usual signs of cholera. The treatment was the warm bath and sinapisms, with a draught containing half an ounce of castor-oil, and a drachm of tincture of capsicum every hour. The man got the oil, but it vomited him. 9th. Has taken the oil up to 9 o'clock, but as he is losing ground it was stopped. The face flushed, and he appeared feverish. Finally, after some consecutives feverish symptoms, he recovered.

It would be easy to fill pages with cases of this kind, but they must be familiar to every man in practice. The action of the castor oil both here and at King's College Hospital, was more as an emetic, and, perhaps, restorative of bile to the intestine, than anything else.

Robert Nichols, aged 60; in the same ward as the last case; he came in September 8th; diarrhœa of a bad kind, watery and choleraic. His general appearance is pallid; voice husky; eyes sunk; lips cold; he presents, in a word, all the signs of advanced cholera; he was ordered six grains of calomel pill with opium, at once, and in the evening a starch enema with twenty drops of tincture of opium. 9th. Small doses of calomel were continued. 10th. Better; to have six ounces of wine. 12th. Recovering under the small doses of calomel.

The admissions into the hospitals are uncertain,—three or more cases it may be in one or two hours, and not as many again in as many days. It is curious that at almost all the hospitals have I heard it remarked that, some of the very worst cases have recovered by being let alone, while other cases, apparently of not a very bad character, have died in spite of every treatment. Examining into this more minutely, I cannot help feeling, as I have before said, that there is organic disease or constitutional weakness of some kind predisposing in the first place to the disease, and afterwards protracting or preventing cure; while in healthier patients, or children, for instance, the reaction or recuperative power is unchanged, and though struck down by the disease, cold and lead-coloured, they have in some instances made striking recoveries.

Many of the cases during the present epidemic, more especially in the Borough and East End hospitals, have been sailors and strangers coming to London. At Bartholomew's I have noticed a great many poor Irish people and foreigners brought in, in collapse. At the West End hospitals the cases have been more mixed. It has been a curious characteristic of the present epidemic, as shown in the cases in the hospitals, the great proclivity of foreigners, Italians, Germans, &c., coming to London, more especially up the Thames, to be, as it were, poisoned by the morbific influence on arriving in town. I believe our quarantine regulations are not at all strict enough; in London such would be almost impossible, yet the general recognition of the principle of the infectiousness of cholera, or its power of being imported or spreading, will be nearer the truth than the opposite or non-infectious view.

One of the worst cases I noticed at Guy's was that of a woman brought in about 11 o'clock in the morning (Tuesday). She had left Colchester a day or two before, quite well; stopped at Woolwich, where cholera was very bad; stated she was quite well the previous day; slept well that night; but at 5 o'clock that morning was awoke with the fatal diarrhœa, and "swimming in her head." At 11 o'clock she was cold, dark-coloured, and pulseless, far gone in collapse. Mr. Stocker, of this hospital, who has paid unusual attention to the cases, has also noticed this proclivity to cholera among travellers and sailors. At the London Hospital, in fact, there has been a sort of uniformity or physiognomy of all the cases, quite peculiar: nearly all have been sailors or men about the docks, generally very dirty, when it is difficult to know in their faces which is sunburn, which dirt, and which the effect of collapse;—a peculiar pinched expression of face and nose, whispering voice, vomiting, and rapid collapse. The very bad hygienic conditions of these men, sleeping in the thick dark fogs of the river, in their miserable cabins, too often with bilge water in various parts of the ship; their bad food at sea; and their being almost proverbially addicted to drunkenness and other debilitating vices, will, of course, help to account for it.

At University College Hospital 50 cases have been treated, and there have been 32 deaths; 26 were treated on Dr. Ayres' plan, 11 recovered; 8 on castor oil, all died but 1; several on hyposulphites, but all died.

At the Middlesex Hospital, where some unusual melodramatic interest is sought to be thrown round the disease, but where everything depended on the want of accommodation for a large number on a sudden emergency, 227 cases occurred; and, as at all the other hospitals in the mass, when the numbers came to be made out, about 50 per cent. died. The scenes at Bartholomew's and at Guy's, it is only fair to say, were quite as trying, but there was more accommodation.

At Guy's, where the wards have been closed for some time, they are now undergoing a thorough whitewashing and painting under an impression that cholera is contagious.

At St. George's the rate of mortality has been very high, 66 per cent.

I entirely agree with some sensible remarks in the "Spectator," that the causes of cholera are not so much specific as general; not in one water company or in another, as Dr. Snow wishes us to believe, but rather in some one wide-speading deadly influence, ammonia rather than ozone, aided and assisted by intemperance, fear, fasting, bad water, unwholesome diet, fatigue; to which I would add organic disease of any debilitating kind, in those seized, preventing that vigorous reaction so necessary to shake off collapse. Some cases appeared with symptoms like asthma; not the sinking of collapse, but dyspnœa of the worst kind: the kidneys also, as a general rule, were at a stand still. Several cases, especially those treated with castor-oil, have had an eruption like measles, and a few have gone into consecutive fever, irrespective of the use of opium, to which this fever is ascribed in London.

A great deal of unnecessary noise has been made about the quality of the water supplied by water companies, yet I think that *quantity* of water has more to do with cholera than quality. Pure water, on the plan of constant supply, is the great sanitary desideratum of London. But the purity of the water in the tanks must depend more on the residents in the houses themselves than on microscopic miasms, chlorides, or gases. The returns of the whole kingdom for cholera rather tend to show that cholera is more fatal in towns, and low, undrained lands; and Mr. Farr, copying some ideas of Mr. Ross, says, *cæteris paribus*, the mortality of districts is inversely as the elevation. I cannot say I am favourable to these so-called social laws, as they are excuses for indolence, systematizing, and perpetuating cholera in hospitals and dispensaries. When we read in the dispatches from the seat of war that cholera "pursued the troops to the battlefield;" that in one ship alone, the Kangaroo, 1500 sick were placed on board, and everything was most disastrously managed,—we must be convinced that cholera, everywhere, depends more on vast masses of men being huddled together, than upon decimals of the barometer, electricity, ozone, or the amount of saline matter in a gallon of water.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

1. *Eighth Annual Report of the Commissioners in Lunacy to the Lord Chancellor, to 31st March,* 1854. Ordered by the House of Commons to be printed, 29th June, 1854. Large 8vo, pp. 328.
2. *The Census of Ireland for the Year* 1851. Part III. *Report on the Status of Disease.* Presented to both Houses of Parliament by Command of Her Majesty. Dublin: 1854. Printed by Alex. Thom and Sons. Folio, pp. 150.
3. *Psychological Inquiries.* London: Longman and Co. 1854. 8vo, pp. 264.
4. *Suggestions for the Future Provision of Criminal Lunatics.* By H. C. Hood, M. D., Resident Physician and Superintendent of Bethlehem Hospital. London: Churchill. 1854. 8vo, pp. 174.
5. *Unsoundness of Mind considered in Relation to the Question of Responsibility for Criminal Acts.* By Samuel Knaggs, M. R. C. S. L., &c. London: Churchill. 1854. 8vo, pp. 96.
6. *The Journal of Psychological Medicine.* Edited by Forbes Winslow, M. D., D. C. L. Nos. 25 and 26. London: Churchill. 1854.
7. *Lettsomian Lectures on Insanity.* By Forbes Winslow, M. D., D. C. L., &c. London: Churchill. 1854. 8vo, pp. 160.
8. *Third Annual Report of the Wilts County Asylum, at Devizes, for* 1853. By John Thurnam, M. D., Medical Superindent. Pamphlet, pp. 41.

9. *Annual Report of the Littlemore Lunatic Asylum for the Counties of Oxford and Berks, for* 1853. By William Ley, M. R. C. S., Medical Superintendent. Pamphlet, pp. 31.

10. *American Journal of Insanity, October*, 1853. Published by the New York State Lunatic Asylum, Utica.

11. *Twenty-Fourth Annual Report of the Belfast District Hospital for the Insane, to March* 31*st*, 1854. By Robert Stewart, M. D., Resident Physician. Pamphlet, pp. 41.

12. *Second Annual Report of the Kilkenny District Hospital for the Insane, to* 31*st March*, 1854. By Joseph Lalor, M. D., Resident Physician. Pamphlet, pp. 39.

13. *Sixth Annual Report of the Somerset Lunatic Asylum, for* 1853. By Robert Boyd, M. D., Resident Physician. Pamphlet, pp. 75.

14. *Annual Report of the Royal Edinburgh Asylum for the Insane for* 1853. By David Skae, M. D., Resident Physician. Pamphlet, pp. 50.

15. *Annual Report of the Norfolk Lunatic Asylum for* 1853. By R. F. Foote, M. D., Resident Physician. Pamphlet, pp. 31.

16. *Three Lectures on the Correlation of Psychology and Physiology.* By D. Noble, M. D., Visiting Physician to the Clifton Hall Retreat, near Manchester. London: Richards. 1854. Pamphlet, pp. 45.

17. *Twenty-Seventh Annual Report of the Perth Royal Asylum for Lunatics, to June*, 1854. By James Sherlock, M. D., Resident Medical Superintendent. Pamphlet, pp. 23.

18. *Fourteenth Annual Report of the Crichton Royal Institution for Lunatics at Dumfries, to November*, 1853. By W. A. F. Browne, M. D., Resident Physician. Pamphlet, pp. 37.

19. *Annual Report of the Devon County Lunatic Asylum for* 1853. By John C. Bucknill, M. D. London. Pamphlet, pp. 24.

20. *Annual Reports of the Staffordshire Lunatic Asylum for* 1851, 1852, *and* 1853. By James Wilkes, Medical Superintendent. Pamphlets, pp. 32, 26, and 32.

21. *Annual Report of the Royal Lunatic Asylum of Aberdeen for the Year ended* 31*st March*, 1854. By Robert Jamieson, M. D., Resident Physician. Pamphlet, pp. 20.

22. *Third Annual Report of the Manchester Royal Lunatic Hospital, to June*, 1853. By Thomas Dickson, L. R. C. S. E., Resident Medical Superintendent. Pamphlet, pp. 32.

23. *Études Cliniques. Traité Théorique et Pratique des Maladies Mentales, considérées dans leur Nature, leur Traitement et dans leur rapport avec la Médecine légale des Aliénés.* Par M. Morel, Médecin en chef de l'Asile d'Aliénés de Maréville, &c. Tome second. Nancy, Raybois. Paris, Masson. 1853. 8vo, pp. 600. With 10 Engravings.

In accordance with our annual custom at this period, for some years past, we now again undertake the pleasing office of laying before our readers an analysis of such publications in connexion with insanity and the treatment of the insane, as have reached us during the preceding twelve months.

1. First on our list is the Eighth Report of the English Commissioners in Lunacy, as ordered by the House of Commons to be printed on the 29th of June, 1854. In our last Review of Insanity we entered pretty fully into an examination of the Commissioners' Seventh Report, which was brought up to the 30th of June, 1852; but not in the hands of the public until late in 1853. The present one is nominally to the 31st of March, 1854, but brings the state of lunacy in England and Wales, in reality, no further than the 31st of December, 1853, thus embracing a period of eighteen months.

It has been always with much pleasure and satisfaction that we have looked into the pages of these Reports, emanating as they do from functionaries of high official standing, vested with powers of a very comprehensive and responsible nature, and we feel justified in saying the Commissioners give every proof of executing their duties in a manner that deserves full and well-merited commendation, the general contents and tone of their Reports being able and dignified; and, as regards their official intercourse with the superintendents and others in the discharge of their duty, gentlemanlike and courteous in every respect. In our last and former Review[a] on the Reports issued by the Commissioners, we called attention to some omissions in them, which we begged to suggest would be very desirable to have supplied for the future, and which are now supplied in three most important particulars, in the one before us, those being, first, the statistics of the several asylums, public and proprietary, as regards the recoveries, deaths, &c.; secondly, the dietaries in use in the respective public asylums;

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[a] Vol. xiv. p. 387, and vol. xvi. p. 369.

and lastly, the costs, &c., of new asylums,—all of which are additions that considerably enhance the value of a document of this description, and the appearance of which in it now, for the first time, has pleased us not a little. We have only one more suggestion to submit, in order to make these valuable Reports still more complete, which is, that the cost of the maintenance of the respective county asylums should be furnished, which we feel assured the Commissioners will not hesitate to afford when next we have the pleasure of meeting them in print.

We now proceed to notice, as fully as possible, the contents of the present Report, which, after recounting the provisions and powers of the several Acts (three) passed since the last one was presented to Parliament, enters into statements and details in connexion with changes in "licensed houses" in the metropolis and provinces respectively, to the 31st of December last; and amongst the first in this category is that of a license being granted to a *Miss*, this Miss being previously, it appears, the *superintendent!* of a private asylum elsewhere; and a little further on, another *Miss*, conjointly with a *Mrs.*, is placed in chief charge of so important a line of duty. In our Review last year, when noticing Dr. Seaton's judicious pamphlet on "The Present State and Prospects of Psychological Medicine," we felt it but right to object strongly, not merely to ladies (much as we respect and esteem them in their proper sphere), but even to non-professional men being licensed as proprietors, such tending "to degrade instead of to elevate the character" of all engaged in the investigation and treatment of mental disease; and we must now again record our protest against so improper a state of things, and seriously call upon the Commissioners to lose no time in providing a remedy for the same.

As regards county asylums the Report informs us, that six additional buildings have been completed and opened for the reception of pauper patients since the passing of the Act 8 and 9 Vict. c. 126. They are as follow, viz.:—

1. For the County of Warwick, at Hatton, near Warwick, for the accommodation of 334 patients, at a total cost of asylum and lands of £68,471 2*s.* 4*d.*, the lands being 42 acres nearly.
2. For the County and City of Worcester, at Powick, near Worcester: 200 patients; £56,216 14*s.* 10*d.*; lands, 46 acres.
3. For the County of Lincoln, at Bracebridge, near Lincoln: 266 patients; £50,101; lands, 45 acres.

4. For the County of Hants, at Knole, near Fareham: 400 patients; £54,472; lands, 114 acres.
5. For the County of Essex, at Brentwood: 450 patients; £75,493 1*s.* 6*d.*; lands, 84 acres.
6. For the County of Bucks, at Stone, near Aylesbury: 200 patients; £43,149 19*s.*[b]; lands, 20 acres.

Besides the above entirely new institutions, increased accommodation has been provided for patients, additional land purchased, and new offices and workshops erected at Gloucester, Hanwell, Surrey, Norfolk, Salop and Montgomery, Oxford, N. and E. Ridings of Yorkshire, and Chester. The counties of Sussex, Cumberland, Westmoreland, Northumberland, Durham, Cambridge, Cardigan, Caermarthen, Glamorgan, and Pembroke, it would appear, are still unprovided with asylums for their pauper lunatics; but steps are being taken in some of them to have so serious an evil remedied, and we think the sooner the better, especially as regards South Wales, where the Commissioners state that the existing provision for the lunatic poor of that populous district, containing upwards of half a million of souls, is very far from being of a creditable kind. Lord Shaftesbury and the Commissioners should look carefully after this, the deficiency, in this instance, being one of great magnitude, nearly four hundred wretched objects depending upon the tender mercies of friends for protection in their unhappy state.

Haverfordwest Asylum, a county one, too, it appears, is much censured, the building being pronounced radically and incurably defective, its scale of domestic management limited and parsimonious, its grounds insufficient for healthful exercise and labour, and its means of varied occupation of the scantiest description. What a discreditable state for a public asylum in the middle of the nineteenth century! St. Peter's Lunatic Hospital, at Bristol, is another such den, it would seem, as the above; but through the salutary interference of the Home Secretary it is in a fair way, we are glad to see, of being replaced by a new and more fitting institution, the present one being a disgrace to that rich and prosperous locality. Hull Borough Asylum comes in also for a large share of condemnation, "*extreme economy*," inadequate furnishings and comforts, *especially for its sick and infirm inmates*, being only a moiety of the Commissioners' complaints against its conduct, though repeated efforts have been made from time to time by them "to arouse

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[a] These were the total sums expended to 1st November, 1853 (the date of the Return); but there were then some works unfinished, and accounts outstanding.

the visiting justices to a sense of its great defects," but all to no purpose. Hull may well be proud of its "extreme economy," loving justices, whose thrift is so much in the ascendant that even the maniac cries of their mad-stricken fellow-burghers will not "arouse" them to do more on their behalf than merely to keep soul and body together. Alas! for the honour of the country, that thus it has gone forth, on the highest official authority, a borough town in England like Hull has steeled itself against ministering to the wants, to say nothing of the comforts, of its lunatic poor.

After recapitulating several special cases of irregularities and of careless management of provincial licensed houses,—no fewer than eleven being all more or less defective, and the Norwich Infirmary Asylum one of them, which is declared to be "bad in site, limited in space, and defective in construction,"—the Commissioners make reference to a very extraordinary case which occurred in Dunston Lodge Asylum, near Gateshead, the facts being shortly these: that one of its male inmates bit the arm of Mr. Wilkinson, the licensed non-medical proprietor, who thereupon had the patient placed in a strait jacket, and then flogged him himself with a riding whip, after which the castigated patient, still under restraint, was taken to a seclusion room, and his two upper incisor teeth, both perfectly sound, extracted by the resident medical officer on his own responsibility; and that after this dental operation had been performed, the patient was kept for a considerable time in seclusion! The result of an investigation into this case was the withdrawal of Wilkinson's license, a new proprietor being now in charge of the above asylum. For the honour of the profession it is much to be regretted that any member of it should have been guilty of such horrible cruelty.

The Commissioners having drawn attention to the difficulties still experienced in their endeavours to remove an adherence to certain errors as to management and treatment in some institutions, which in the best conducted establishments are condemned, and have now become obsolete, make some exceedingly judicious observations respecting the causes thereof; and thus state their views as to the manner in which the internal discipline of insane establishments should be conducted.

> "Our experience confirms the opinion which we have already expressed in former Reports, that in order to insure good management, it is essentially requisite that the resident medical officer should, as superintendent, be invested with paramount authority. All officers and servants should be under his control. He should

have the power of engaging and dismissing all nurses and servants, and of recommending and suspending sub-officers. He should also be responsible for the general management of the establishment, and should regulate the medical and moral treatment, and the diet and clothing of the patients. He should be provided with apartments suitable to his position, and his salary should be liberal and such as to secure the services of a highly qualified and efficient officer.

"We have deemed it important to draw attention to the foregoing considerations, in the hope of inducing the governors of hospitals for the insane to adopt the most enlightened system of management; and, by so doing, to take the lead in the work of amelioration, which is in progress throughout the country, and which, in establishments where the proprietor or medical officer is solely responsible and invested with full authority, has been especially manifest."

In connexion with the foregoing extracts we may observe that, in the Commissioners' Report (the seventh) which we reviewed last year, it was strongly recommended that "paramount authority should be vested in the superintendent, and not shared or interfered with by any other person whomsoever"[a], which expression of official opinion we then highly commended as it deserved, its soundness and propriety being indisputable, and its importance not to be over-estimated. This opinion they now repeat in all its former force; but, more than this, they strenuously advise that not only should the controlling, engaging, &c., of nurses and servants be placed in his (the superintendent's) hands, but also that he should have the power of "recommending and suspending sub-officers." If our readers will take the trouble of turning to our Review on Insanity in 1851, they will there find that we stated it as our conviction, "subordinate officers generally, in hospitals for the insane, should be appointed by the physician-superintendent, and be completely and entirely under his control"[b]; and now, seeing that the Commissioners in Lunacy have approximated somewhat to our recorded views upon a point of internal discipline affecting so deeply the welfare and continued good progress of our asylums, we cannot but feel pleased; yet we would have been much more so had the words *appointing* and *dismissing*, respectively, been used by them, instead of "recommending and suspending," the latter being a negative kind of authority that will never achieve the object intended.

St. Luke's Hospital would still appear not to come up to the Commissioners' wishes in its general condition, the medical and other arrangements of the hospital requiring to be materially improved. The occupancy of its "basement" by female patients is animadverted upon, and a gentle rebuke administered for a want of "easy chairs and comfortable seats," as well as for a suggestion of the Commissioners not having been carried into effect, namely, permitting some of the patients to take exercise in the suburbs of London:—"We are glad to learn, however," says the Report, "that the Governors have advertised for the hire of land at no great distance from London." We may mention, with reference to this Hospital, that some years ago we were afforded an opportunity of going through its respective divisions—being accompanied upon the occasion by Dr. Sutherland, one of the visiting physicians—when it struck us forcibly how entirely and altogether unsuited the institution was for its purposes, both internally and externally,—in the former respect being of the completely old school in its inconvenient arrangements, and externally of a prison-like appearance: and otherwise only to be compared with our own Metropolitan District Asylum in Channel-row, being located in the midst of a dense and poor population, and in immediate propinquity to lanes and alleys, and buildings anything but adapted to promote either physical, mental, or moral health, their dirt, and noise, and gloominess, respectively, being but too well calculated to fix deeper and deeper the sad affliction of which its unhappy inmates were the subjects. To expend money for the improvement of St. Luke's Hospital would indeed be labour in vain, and an insult to the advance of the age, as has been the case with regard to the Dublin District or Richmond Lunatic Asylum above referred to, the thousands of pounds sunk in its alterations and extension, and *quasi* improvements, being a sample of the wisdom which rules the Board of Works in Ireland. We would, therefore, strongly press upon the authorities of St. Luke's Hospital to make an offer of their institution to the Government as a capitally circumstanced one for criminal lunatics; it being in its gaol convertibility and structural barriers of egress to those within its adamantine walls, the very building, together with Bethlehem, that would suit for the purpose; and instead thereof to erect an entirely new hospital completely in the country, and otherwise properly circumstanced, for the benefit of the poor insane of the wealthiest city in the civilized world.

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[a] Seventh Report of the Commissioners in Lunacy, p. 12.

[b] See vol. xii. p. 402.

The Commissioners dispose of Bethlehem Hospital very shortly, merely stating that it appeared unnecessary after the special Report made to Government relative to its management, which was noticed in our Review last year[a], to say more on the present occasion than that " the whole system of the establishment had been revised, and the management placed under the resident physician, Dr. Hood, who had been invested with paramount authority."

Respecting the naval and military hospitals for the insane of the army and navy, frequent visits had been made by the Commissioners to those at Haslar, Yarmouth, and Fort Pitt, Chatham, and reports made thereon to the proper authorities, the nature of which is not stated; but from the annexed paragraph we gather, not of the most favourable kind, at least as regards those at Yarmouth and Chatham: a disgrace to the country that her brave soldiers and sailors, stricken down by insanity, should not be well and liberally provided for when so painfully circumstanced. We honour the Commissioners for the manner in which they have stated their opinion upon this point:—

> " We have been especially anxious to render every assistance in our power towards promoting the improvement of these hospitals, as we entertain a strong opinion that the maintenance of well-constructed, well-managed, and complete asylums, affording the best accommodation and treatment for both officers and men, when attacked with insanity, are indispensable to the public service."

At Fort Pitt, two of the Commissioners on visiting it discovered that "although the list sent to them from the War Office contained only ten names, they found twenty insane patients," who were placed in a part of the building which is described as " gloomy, damp, badly ventilated, poorly furnished, and in other respects very unfit for the reception and accommodation of lunatics." A more disgraceful state of things could not be than this, nor one for which the Government should be called to more severe account; besides, the commission of a flagrant untruth is here plainly charged to the War Office, and for which an explanation should be demanded.

The asylums for idiots are next referred to and reported upon in a generally favourable manner, but the Commissioners are of opinion that a greater advance would be made in their condition by the treatment they receive, " if less time were spent in their scholastic instruction, and a larger share of attention paid to the means best calculated to improve them physically, and impart to them a more extended knowledge of the properties and uses of external objects,"—an advice which we think is very sound, and well worthy of being attended to. Three of these excellent institutions are in full operation, one at Park House, Highgate, for the wealthier classes; and one each at Essex Hall and Severals Hall, near Colchester, for the poorer classes. 250 inmates were contained amongst the three establishments, the medical superintendents of which "are recommended to be invested with full powers, and paramount authority over the establishment, and liberally remunerated, as in the case of county asylums and ordinary lunatic hospitals" (p. 32).

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[a] Vol. xvi. p. 368.

Two cases of prosecution by the Commissioners for ill-treatment of patients are enumerated: the first being against a person named Evan Roberts for confining his brother in an excessive, improper, and cruel manner, when the defendant was found guilty and sentenced to a month's imprisonment; the judge (Campbell) distinctly laying it down, "that the use of restraint greater in degree, more severe in character, or longer in duration, than is necessary for the security and care of a lunatic, is an offence at common law, punishable by indictment." The next was a case very similar to the above, which by an oversight was omitted to be given in the Commissioners' last Report, and in which the defendant, named Yeo, was sentenced to six months' imprisonment for assaulting and falsely confining a harmless lunatic named Luxmore.

A large portion of this Report is taken up with the subject of mechanical restraint, "as a mode of treatment," the Commissioners having addressed a circular letter to the superintendents and medical proprietors of nearly all the lunatic asylums and licensed houses in England and Wales, requesting their views upon the subject. Accordingly, a mass of writing in reply was the result, as will be manifest when we state that, published as it now is, even in a greatly condensed form, so many as nearly one hundred pages are devoted to this *quæstio vexata*, for such it is, and such it will be to the end of time. The Commissioners intended well, no doubt, in this procedure on their part, but, with great respect for their judgment, we are of opinion that they gave themselves the performance of a very useless task, and that as well might they have called upon the superintendents to give their opinion about the propriety of subjecting their patients to a plunge bath, or douche bath, or any other plan of treatment in violent cases, as the application of mechanical restraint. To say that coercion by mechanical means is "never necessary, never justifiable, and always injurious, in all cases of lunacy whatever," is about one of the most untenable and preposterous axioms of the teetotal school that was ever uttered. It is in our opinion a most unjustifiable interference, this matter of absolutely endeavouring to force men's judgment, and coerce them through fear of being held up as unfit for their post of duty[a], if they honestly carry into practice what their consciences tell them is right, and humane, and proper, under certain circumstances, in certain exigent cases. *Fiat justitia ruat cœlum.* We again affirm that it is the abuse, the promiscuous and unrestrained use of restraint, that which hitherto was so improperly permitted to be practised by non-professional superintendents, and keepers, and nurses, that is to be condemned, and which we condemn, nay, denounce, as decidedly and strongly as the most enthusiastic follower of the teetotal sect could; but not its legitimately exercised application, under duly responsible professional superintendence. The remarks of Dr. W. H. Ranking, of Norwich, Dr. Forbes Winslow, Mr. Harris, and Mr. Matthews, and other equally eminent authorities, contained in the published correspondence in this Report of the Commissioners, we would call especial attention to, as being honest and straightforward, and deserving of the highest commendation for the moral courage they have displayed in giving their opinions as they have on this point. We can only quote a short extract from the first-named, in the whole scope and spirit of which we heartily concur:—

> "With reference to the mooted question of the total abolition of personal mechanical restraint, we beg to state that we acknowledge to the fullest extent the advantages, as well as the moral obligation, to dispense with the frequent recourse to restraint of any kind. At the same time we regard the entire and unconditional abolition of simple mechanical restraint as a piece of psychological quackery, well adapted to catch the unreflecting sentimentality of the vulgar, but rarely, we have reason to believe, carried out to its fullest extent, even by its warmest advocates. The occasional use of the muff we regard as indispensable in certain cases, and we think it at all times merciful in comparison with the horrors, physical and psychological, of a padded room, where the patient is left to himself for hours, and alone. At the same time that we sanction the occasional use of such means of restraint as the muff and waist-belt, we most distinctly pronounce that it is not with the object of economizing attendants, but from a conviction that it is for the advantage of the patient. We have, in fact, yet to learn that such restraint of a violent patient is more irritating to him than the continual jostling and struggling with two or three attendants."

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[a] Witness Dr. Diamond's opinion (of the Surrey Asylum) at page 140, Appendix (G), of the Commissioners' Report, who disports himself after this fashion:—"I believe that any person who would now use personal restraint or coercion *is unfit to have the superintendence of an asylum*"!

Another vexed question—that of the permanent disposition of criminal lunatics—is largely taken up by the Commissioners, whose views we hold to be so correct, and which are now again so forcibly and unanswerably put, that we cannot see how the Legislature can longer defer acting upon them, and having asylums established for their separate and distinct care and *custody*. We annex a few of the more leading observations of the Report on this head:—

" We think it very important that ordinary asylums should be, in fact and character, considered and managed simply as hospitals for the medical and moral treatment of insanity. Residence therein should not be associated in the minds of the inmates or their relatives with the degrading ideas of criminality and imprisonment. All the inmates alike should be taught to feel that the object of their being placed there is recovery from mental disease, for which temporary seclusion from general society is one of the means of treatment. The construction and arrangements of the buildings and grounds, and the entire system of management, should, as far as possible, be divested of the idea of confinement.

" This has been the general view taken by the Legislature in the recent Acts, as will be seen on reference (*inter alia*) to the altered forms of orders and medical certificates, in which, for the words 'a proper person to be confined,' are substituted, 'a proper person to be taken charge of, and detained under care and treatment.'

" Thus the notions of a prison and safe custody are carefully avoided, and the true object of institutions for the insane is properly recognised. Practically this enlightened and humane policy is now carried out in all well-conducted asylums, which, on that ground amongst others, are wholly unfit for the purposes of the due security of criminal patients.

" The conclusion to which the foregoing observations lead is, that State provision should be made for the separate custody, care, and treatment in asylums exclusively appropriated to the purpose of criminal lunatics of various classes confined under Royal or Secretary of State's warrants. For these classes, and for weak-minded inmates of the present convict prisons, we have reason to believe that two, or at most three, State asylums, of which one would, probably, be in the neighbourhood of the metropolis, would suffice, inasmuch as, for reasons which will afterwards appear, the number we think of such persons may be materially diminished.

" The State asylums would, of course, be so constructed as to admit of the due classification of the inmates, with reference to nature of crime, mental state, and habits, and previous condition of life.

" With reference to the general question of establishing State asylums for criminal lunatics, it is material to state that the Central Asylum at Dundrum, near Dublin, which was established by Government under the provisions of the Act 8 & 9 Vict. c. 107, was reported by the inspectors, in their Sixth Report, 1853, after it had been in full operation for three years, as having been eminently successful, and as fully realizing the object for which it was originally experimentally intended.

" It may be deserving of consideration, whether it might not be expedient to make provision in a State asylum not only for criminal lunatics, but for convicts in the Government prisons, who, though not certified as insane, are yet in a state of imbecility, bordering on insanity, and for whom the discipline and general system necessary to be uniformly maintained in a convict prison are not suited.

" In reference to one of the suggestions which we have submitted, viz.: that persons charged before justices with indictable offences, and found then, on due inquiry, to have been insane at the time of the perpetration of the crime, should not be committed for trial, but discharged, or dealt with either as lunatics not under proper care and control, or otherwise according to circumstances,—we are of opinion that the suggestion is just and reasonable in principle, and that its adoption would tend materially to diminish the numbers of one, and that a large class of criminal lunatics, viz., those tried and acquitted on the ground of insanity.

" If, upon the occasion of the trial of an indictment, the plea of insanity be set up, we are disposed to think that the question should be tried and determined by the Court, after taking medical and other evidence, and not by the common jury empannelled to try the facts.

" It is notorious that many criminals are acquitted most improperly on the ground of insanity, and these are among the most objectionable and mischievous of the inmates of asylums. In the event of an ultimate acquittal on the ground of insanity, the accused, if then deemed of sound mind, might, probably, at the discretion of the presiding judge, either be absolutely discharged as legally irresponsible for the offence, or be required to find sureties, or, in default thereof, be sent to a State asylum. If deemed still not of sound mind, although of sufficient mental capacity to plead to the indictment, he might, perhaps, be dealt with as a lunatic not under proper care and control.

" We would further submit, that such justice might be empowered, in special cases, to order the detention of persons apparently of sound mind, acquitted on the ground of insanity, and that the Secretary of State should be authorized, on the Judges' report, to order the removal of such persons to State asylums.

" As a general rule, ' insane convicts' should, we think, be sent, under the authority of the Secretary of State, to State asylums.

" As respects all criminal lunatics in State asylums or elsewhere, the Secretary of State ought, in our judgment, to be invested with unlimited powers, to order their discharge, either absolutely or conditionally on finding securities, at his discretion.

" In the event of the views upon this important subject which we have submitted being adopted by the Government, and carried out by the establishment of State asylums, it will, probably, be deemed right that the same should be made subject to our visitation."

The statistical and dietary Tables contained in the appendix are very satisfactory, being prepared with much care and completeness. We give below a summary return of insane persons confined in asylums, hospitals, and licensed houses, up to the 1st January, 1854, the latest date to which they are given in the Report; and with which we must conclude our already extended notice of this valuable and very ably drawn up "Blue Book."

Summary of Insane Persons under Treatment in England and Wales, on 1st January, 1854.

	Private.			Pauper.			Total.	Total.	Total.	Criminals.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Lunatics.	M.	F.	Total.
Asylums, ...	147	146	293	5,791	6,878	12,669	5,938	7,024	12,962	186	55	241
Hospitals, ...	702	695	1,397	106	110	216	808	805	1,613	89	22	111
Metropolitan Licensed Houses, ...	608	598	1,206	418	723	1,141	1,026	1,321	2,347	20	6	26
Provincial Licensed Houses, ...	795	738	1,533	593	407	1,000	1,388	1,145	2,533	125	20	145
	2,252	2,177	4,129	6,908	8,118	15,026	9,160	10,295	19,455	420	103	523
Royal Naval Hospital, ...	109	..	109	..	..	..	109	..	109	..	..	..
Military Lunatic Asylum, ...	90	5	95	..	..	..	90	5	95	..	..	..
	2,451	2,182	4,633	6,908	8,118	15,026	9,359	10,300	19,659	420	103	523

2. The only portion of the "Report on the Status of Disease," by the Census Commissioners of Ireland, which we shall here notice, is that part of it having reference to the "Number and Condition of Lunatics and Idiots in Ireland;" this necessarily occupies a large space in the Report, the subject being one of no inconsiderable importance to the statistician. The Commissioners set out by observing, that as for a "considerable period Annual Reports had been presented to Parliament by the Inspectors of Lunatic Asylums, they approached a subject on which they possessed some means of comparison with previous times;" and further, that "from the number of persons belonging to the class under consideration, who were confined (under treatment rather) in properly regulated asylums and other public institutions,—the information respecting lunacy and idiocy which has been afforded is much more exact than could pos-

sibly be obtained at any previous time." This, we consider, is a very candid and fair admission on the part of the Commissioners, who thus evidence every disposition to act on the principle of *suum cuique*, and not to arrogate to themselves exclusively the ability and capability of enlightening the public in this department of their important and onerous labours. The Reports of the Inspectors of Lunatic Asylums in Ireland we have ourselves always read with much interest and profit, and in now incidentally referring to them we think it but just and right to point them out as very able public documents, in which a large amount of important information is always contained, and all arranged, too, in a very clear and satisfactory manner.

After some preliminary remarks, showing the means adopted towards insuring correct returns from the different lunatic asylums, gaols, and workhouses, we have an enumeration of the number of persons returned as affected with lunacy or idiocy in the entire population upon the night of the 30th of March, 1851, which was as follows, viz.: Lunatics, 5074 (2503 males, and 2591 females); idiots, 4906 (2666 males, and 2240 females); in all 9980. Of the insane class 3234 were in public or private asylums, 273 in gaols, and 494 in workhouses; while, of the idiotic class, only 202 were in asylums, and 13 in gaols; but 1129 were located in the different workhouses,—which, in passing, we may observe, are much more fitting places of restraint for idiots than lunatic asylums. Regarding the proportion of the insane and idiotic to the general population, we find that there was 1 lunatic in every 1291 inhabitants, and 1 idiot in every 1336 of the entire population. Taking the country provincially, Connaught would appear in strong contrast to the other provinces, in enjoying an immunity from both lunacy and idiocy, there being but 1 in 1022; and, on the other hand, that these maladies are greatest in Leinster, where the proportion is 1 in 484. Ulster comes next in order to Connaught for sanity, its proportion being 1 in 679; then Munster, which is 1 in 729.

The Commissioners, we are glad to perceive, call the especial attention of Government to the necessity there exists of steps being taken towards the education and moral improvement of idiots and imbeciles, which, they very properly remark, "is a subject which at present engages the attention of the philanthropic, both on the Continent and in England, where several establishments for the purpose have been erected, and are supported by the State; and in which the susceptibility of this class to a certain amount of education has been demonstrated." We may on this point observe, that in our present

Review we have given, from the Report of the English Commissioners in Lunacy, the condition of the asylums for idiots in England, which are being carried on with much zeal, and with the best effects; and that last year we called attention to the backward state of Ireland in this respect, asking, "When would our own country make a move in this labour of love"[a]? in which, however, we regret to say it appears most apathetic, to use no harsher term, and this in a matter which so loudly calls for active benevolence. We have next a very interesting section on the occupations of lunatics, and presumed causes of insanity, from which we find that, of the professional class, 404 were affected with insanity, "a large amount, considering the proportion which this class bears to the great bulk of the people, and exceeding by a considerable number all the other specified classes, with the exception of the agricultural. This preponderance of mental disease among the professional and upper classes shows how much more education and habits of thought tend to produce aberration of intellect than ordinary manual labour." "Among the professions we find the following numbers affected with mental disease:—Clergy, 36; officers, including those of the army, navy, and police, 34; lawyers and attorneys, 28; and medical men, 13. Of the 404,–151 were females; 148 belonged to what is termed the middle and upper ranks of society, specified as Gentleman or Lady." In the second class are included those engaged with professional and mercantile pursuits, which numbers but 22, the smallest of the entire. The third class embraces the literary and educational, and numbers 100 (65 males, 35 females). In the fourth class we have shopkeepers and traders, numbering 110 (86 males, 24 females). In the fifth, first-class trades, it numbers 161 (158 males, 3 females); grief and intemperance were here the prevailing causes. In the sixth are second-class trades, painters, shoemakers, butchers, tailors, &c., amounting to 421 (391 males, 30 females). The seventh class is of the agricultural order, numbering 1598 persons (1496 males, 102 females). The eighth class includes 82 persons, seafaring men, car-drivers, &c. The ninth numbers 202, all females of special occupations alone; 44 of whom became deranged from moral, and 20 from physical, causes. The tenth class is the most varied of all, and largest, 6862 (2616 males, 4246 females); 5765 were unspecified, chiefly idiots. Among the specified occupations were servants, mendicants, soldiers, &c. As to social condition, we learn that of the entire 9980 persons, 1720 were married (647 males, 1074 females). As to education the proportions were, exclusive of the idiotic, 100 educated to 61 uneducated, thus confirming the opinion with respect to the more educated class being more liable to mental disease than the unenlightened. The annexed extract of the Commissioners we think very judicious, and recommend it to the especial notice of those to whom it is addressed:—"We would suggest to those who have the care of the insane a more careful inquiry into the cause and form of disease under which patients labour, by which means, upon the next inquiry of this nature being undertaken, so large a proportion of the unspecified shall not appear." The Court of Chancery lunatics amounted to 108 persons (76 males, 32 females), who were either in asylums, or under the care of friends, in March, 1851, of whom 13 were resident in England.

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[a] See vol. xvi. p. 386.

Mania prevailed chiefly, compared with the total number of the insane, in the counties of Monaghan, Tipperary, Longford, King's, Donegal, and Londonderry; and the suicidal propensity was developed most in the counties of Carlow, Wicklow, Kildare, Kerry, Armagh, and the city of Limerick. Monomania most in the cities of Limerick, Kilkenny, and Dublin, the town of Drogheda, and the counties of Kilkenny and Kildare; whereas dementia prevailed most in the cities and counties of Waterford and Dublin, the city of Kilkenny, and the counties of Meath, Galway, Sligo, Roscommon, and Limerick. We have an exceedingly interesting account next given of the origin and history of public asylums for lunatics and idiots in Ireland, which, could we afford space, we would willingly transscribe in its entirety. From it we find, that the first record of the erection of lunatic cells in Ireland was in the year 1732, when six strong cells were made at the Foundling Hospital and Workhouse of the city of Dublin (now occupied as the South Dublin Union Workhouse), for the most outrageous lunatics, which were soon filled, and by degrees, in a short time, there were 40 and upwards in the house. With reference to Swift's or St. Patrick's Hospital we glean the following interesting particulars: that the celebrated Jonathan Swift, Dean of St. Patrick's, bequeathed the sum of about £12,000 to purchase lands, with the profits of which to erect and endow an "hospital large enough for the reception of as many idiots and lunatics as the annual income of the said lands," &c., shall be sufficient to maintain. In 1746, a year after the Dean's death, his executors were incorporated by charter into a body of governors; voluntary contributions to a large amount were collected, which, with Parliamentary grants, and the proceeds of the Dean's bequest, enabled the governors to erect the present hospital in the vicinity of Kilmainham, and to open it for the reception of 50 patients upon the 9th of September, 1757. The present building, which was one of the first of the kind established in the British Isles, is at present capable of accommodating 150 patients.

We have now given a few, and a very few only, of the leading points of this really interesting and valuable Report of the Census Commissioners, as regards the " lunatic and idiotic class;" we have read it with extreme pleasure and profit, and regard it as a most important and creditable addition to the psychological literature of the day.

3. Among several other works which have lately constituted the material of our perusal, in connexion with psychology, as related to insanity, is one abounding with traces of real philosophy in this department of mental science. This unpretending little volume, entitled " Psychological Inquiries, in a series of essays, intended to illustrate the mutual relations of the physical organization and the mental faculties," is anonymous[a], conducted in the form of dialogue, and bears unmistakable evidence of the hand of a clear and clever writer, as well as of an accurate thinker. The attentive reader will find several portions bearing on the interesting subject of this article, all of which will repay a careful perusal. Among others we may notice the following reference to the correlative actions of the mental part of man, and its physical organ:—

> " A physician, whose knowledge of the subject is not surpassed by that of any one in Europe, assures me that, ' when mental derangement seems to have been induced by moral causes, it is generally to be presumed that there was originally an imperfect state of the brain forming a predisposition to the disease.' Then, be it observed, that as the brain may influence the mind, so may the mind influence the brain. It is in this manner that volition, acting on the brain first, and on the nerves afterwards, produces muscular contractions, that grief causes tears to flow from the lachrymal gland, and that the mouth becomes parched, and the digestion of the food interrupted, as a part of the consequences of anxiety of mind. So also persons have been known to suffer from imaginary hydrophobia, experiencing not a few of the symptoms of that terrible disease. In such cases the mind is affected first, the nervous system afterwards, the latter reacting on the mind and confirming and continuing the illusion. If the functions of the brain should be thus disturbed during a very long period of time, it may well be supposed that some actual change will at last be produced in its

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[a] Common fame attributes its parentage to Sir Benjamin C. Brodie, Bart.

organization; and indeed it is not very easy otherwise to understand how mental derangement, induced by moral causes, should be permanent, when the causes themselves have been in operation only for a limited period. Nor is there in this anything more remarkable than the fact of organic disease of the heart being, in some instances, distinctly to be traced to anxiety of mind."—pp. 92, 93.

The phenomenon of sleep is carefully and instructively handled, the writer agreeing with Dr. Darwin, that the essential part of sleep is the suspension of volition. Among other remarks on this topic the annexed extract will be found interesting:—

> "When I do not easily fall asleep at night I frequently succeed in obtaining sleep by watching the strange, indescribable, and ever-varying spectra, which I refer to the eye, though they are, probably, in the brain itself, and which present themselves when real objects are excluded from the sight. It is not that on such occasions as those to which I have referred, there is absolutely no effort of attention, but the effort is so slight that it is next to none at all, and readily ceases of itself at the same time that it prevents the greater effort which I should be led to make if things of higher interest were to occupy the mind."

The portion of this little volume, however, which will, we apprehend, be found of most interest to the professional or semi-professional reader (if we may use such a term) is that in which the changes in the nervous system, the adaptation of the brain to the mental faculties, the influence of external senses on the mind, &c., are treated. Under the first of these heads the writer very justly remarks:—

> "The mind preserves its identity, but there is no corresponding identity of the corporeal organ with which it is associated; and we may even venture to assert that the brain of to-day is not precisely and in all respects the same with the brain of yesterday, and that it will not be the brain of to-morrow."

This remarkable diversity between the mental actuating principle and its physical organ is, we think, strongly confirmative of the indestructibility as well as of the independence of the former; and the idea thus thrown out might be traced, not without much profit, both analogically and in the way of contrast, much further than our author has done. The writer deals hardly with phrenology, and especially in the portion of his treatise where he handles the subject historically, adducing some rather absurd and amusing instances, certainly, of the mode of research adopted by its inventors, Spurzheim and Gall. On the whole, however, we are inclined to agree with him in his estimate as regards the extremes to which the system has been pushed, especially in its more notorious phase of phreno-mesmerism, though we would be slow to pass a wholesale condemnation on the theory that the shape, size, and material of the brain, exercise an influence on the mental and moral faculties.

4. Dr. Hood's recently published volume on "The Future Provision of Criminal Lunatics," we have perused with neither advantage nor satisfaction. It has, in truth, greatly disappointed us, as we expected that at all events he would not have been behind the age in which our lot is cast, as he certainly is when he casts to the four winds the well-matured views of the great majority of his brethren, and the public voice also, by recommending that criminal lunatics, whether of a minor or major stamp as to the "description of offences" they had committed, should be "confined in the county asylums established in the counties to which they respectively belong," and there be kept in "safe custody," each asylum being required to be provided with "a special ward." His proposition, too, that the Commissioners in Lunacy should have the "immediate jurisdiction," besides the "entire classification and general management" of the criminal inmates in "safe custody" in the county asylums, is about one of the strangest and most preposterous suggestions we have seen on the subject. We hope he had no furtive object in view in thus desiring to degrade the office he should rather have upheld, by wishing to impose upon its holders so humiliating a duty. We think the Commissioners would be but little obliged to our author for imposing on them so ungracious and impossibly-to-be-executed a task. Bethlehem, or some other recognised hospital, Dr. Hood advises should be a "State asylum," in which to confine "the highest class of offenders." Be it so—we believe that this Hospital in St. George's-in-the-Fields could not be allocated more fittingly or appropriately; Dr. Hood could then be left "alone in his glory" with the "safe custody" of his "highest class," to be deprived of the charge of whom he appears so apprehensive, but *de gustibus nil disputandum est.* Before leaving Dr. Hood's book we must observe, that it appears to us not a little strange that he wrote it in entire obliviousness of a Central Asylum being established in Ireland for some years, by legislative enactment, for criminal lunatics, and fulfilling its uses most satisfactorily. This important Government establishment is, however, never once referred to by him, although he had the Parliamentary Report of the Irish Commis-

sioners of Asylums under his eye, from which he quotes a paragraph respecting the expediency of liberating criminal lunatics under certain circumstances, but takes no notice whatever of the institution expressly set apart for the reception of the class of persons to which his work was specially directed.

5. The subject of the disposal of those acquitted of criminal acts on the ground of insanity, has called into requisition the pen of another member of the profession, Mr. Knaggs, the general scope of whose observations in his publication, which comes next under notice, on "Unsoundness of Mind in Relation to the Question of Responsibility for Criminal Acts," does him much credit, and evidences a more intimate and practical acquaintance with the immediate matter in hand, than those whose position and opportunities would have led tô the inference that something even still better from them would have emanated. Mr. Knaggs advocates the common-sense principle of separating the criminal lunatics from the others, in asylums set especially apart for this class, who should be all placed under State supervision, and no distinction made in the case of rich or poor in that respect: a view of his, as well as many others, we hold to be quite sound; and would recommend a perusal of this essay to all who take any interest in the criminal lunatic controversy, if we may so term it.

6. In the list of works we have to pass in review on the present occasion is, as usual, the Psychological Journal of Dr. Forbes Winslow, with which we may embrace the "Lettsomian Lectures," delivered by him before the Medical Society of London, and published consecutively in that "Journal," but now presented to the profession as a reprint in a separate form. Of the Journal itself we most gladly reiterate our former entire satisfaction with its conduct and spirit, which are beyond all praise, and the firm hold it has taken accordingly in professional estimation is only such as it pre-eminently deserves. In the issue for January we have an able article on "Modern Demonology and Divination," which exposes the gross folly of the delusions under which the mesmerists labour, and "the real danger to Christianity in the cultivation of the ideas" which they hold, now denounced so justly by the writer of the article in question, who well observes that—

"It is incumbent on the educated and more sober-minded of the clergy and laity of Christendom, not of one sect or section, but of the entire body, to stand forward and vigorously clear away from Christian doctrines and worship those Pagan doctrines of apparitions and demons."

7. The Lettsomian Lectures are three in number, each being highly interesting and suggestive. The first is devoted to a treatise on "the psychological vocation of the physician," in which is vividly described how great is his responsibility "in a calling so dignified, exalted, and honourable, for the right use of his talents, and the faithful discharge of his duties." The second has reference to the "medical treatment of insanity," in the course of which the lecturer strongly dwells upon—

> "The fatal consequences which have so often ensued from a belief in the incurability of insanity by medical means, and this too in all grades of society, even influencing the conduct of county magistrates in the architectural proportions, medical organization, and general arrangements, of important national asylums, thereby degrading them, as well as private institutions, into places of detention, instead of conferring upon them the character of *hospitals for the cure of the insane*, under the supervision of medical officers, well trained by preliminary education for their important vocation, acquainted with the philosophy of the human mind, and fitted by the character of their *heart*, as well as by the vigour of their *intellect*, for the right performance of the solemn and responsible duties intrusted to them by the public and the Legislature."

The third and concluding lecture of the series discusses the all-important subject of "medico-legal evidence in cases of insanity," which, with the other two, contains an amount of matter invaluable of its kind, and well worthy of its eminent writer, whose untiring labours in promotion of the increased well-being and welfare of the insane entitle him to hold a high rank, indeed, amongst the philanthropists and bright lights of the age.

8. In casting our eye over the pages of the Third Annual Report of the Wilts County Asylum for the year 1853, the following sentence, contained in that portion of the Report devoted to the 'sayings and doings' of the Committee of Visitors, arrested our attention, viz. "To the treasurer, for aid in the departments of accounts, their obligations are the greatest."

A secondary officer, comparatively, in an institution for the treatment of mental disease, to be thus marked out for the largest share of annual commendation of the Visitors, surprised us, we must acknowledge, not a little. What! has it come to this, that 'the man who does' the merely pounds, shillings, and pence business of an asylum shall be placed over the head of the really responsible officer of the institution—the medical superintendent—and be proclaimed as alone deserving of the "greatest obligations" of those Solons rejoicing in the denomination of Visitors? To say the least of it, we consider this exceedingly bad taste, with which expression of opinion we shall leave the subject, and proceed to the more genial atmosphere of the Medical Superintendent's Report, which is a very interesting and well-drawn-up document, as must be expected from the pen of its eminent and highly qualified writer, Dr. Thurnam. The general and moral treatment of the insane is pretty largely and freely discussed by the writer, in the course of whose remarks reference is made to the barbarous method of a former age, to Pinel's reform, and the improved system commenced, half a century ago, in the York Retreat, in the management of this class of patients, the most marked feature of which was the abolition or diminishing of even the mildest form of mechanical restraint. The methods of treatment in the Wilts Asylum are next alluded to, no part of which, it is stated, is made up of personal restraint,—not that Dr. Thurnam commits himself so far as to say that no possible case could occur to make such necessary. Had he done so, we would not have considered him the wise and humane man that we believe him to be. Violent patients are placed in seclusion. Those preferring their 'birth-day suit' to any other, are compelled to reconcile their limbs to the restraint of trowsers, and other equally useful and necessary garments in these countries, by keeping them on with ingeniously contrived button-locks. Destructives are cased, not in buckram exactly, but in "canvass, bed-tick, or sail-cloth;" materials which, however strongly savouring of restraint, or apparently unfitted to turn out a suit 'a-la-Stultz,' are not to be thought the less of on that account,—the useful, and not the ornamental, we presume, being what is most studied and practised under such circumstances, and most properly so.

Medical treatment, Dr. Thurnam observes, is often required in every class of cases; but the most satisfactory results arise from a combination of moral and therapeutic measures. Regarding the actual recoveries during the year, we are informed that 34 had this happy termination, out of a total of 324 under treatment, 16 of whom were males, and 18 females, the males and females in the aggregate being 147 and 177 respectively. The improved cases were 10; 4 being males, and 6 females. The casualties in death amounted to 23, 15 males and 8 females; bearing out here what we have remarked elsewhere, that insanity has a more fatal tendency in the male than in the female sex. Of the causes of death, the largest number, 4, and all males, arose from inflammation of the lungs; diarrhœa, 2, a male and a female; pulmonary consumption, 2, male and female; exhaustion, 2, both females. One case of suicide of a male patient occurred during the year, who had only been admitted the day previously, and, though under the care of a special attendant, he yet, notwithstanding, accomplished the one object upon which he had concentrated his thoughts, taking advantage of an unguarded and unsuspected moment to cut short the thread of his miserable existence. We believe firmly, from our own observation and lengthened experience, that there are cases of this description in which nothing short of the foresight of divinity itself could, by any possible means, prevent the fatal deed being accomplished,—and the foregoing appears to be one of these. Another death arose from the effects of a suicidal wound, committed *before* the patient, a male also, had been received into the Asylum; and, labouring under the immediate effects of which, we question much the propriety of his reception into it from the Salisbury Infirmary. Sudden death from natural causes took place in one instance: a female, who was found dead in bed; she was at the time the subject of paralysis, and having turned over on her face during the night, asphyxia was the consequence. There was nothing remarkable in any of the other cases in this category; and here it should be observed, that post-mortem examinations were the means by which the causes of death tabulated in the obituary list were all ascertained. Here is another institution, erected but three short years, and yet already sounding the note of additional accommodation being all but now required for twenty or thirty females, which, no doubt, will be very alarming to the ratepayers, thus soon again to be called upon to open their purse-strings on behalf of their crazed sisters; but they are comforted by Dr. Thurnam, who shows, by a comparative Table of the rates of accommodation of each patient in four other newly erected asylums, that whereas such was provided in the Wilts Asylum at £200 per head, the others varied from £230 to £327 each; so that, having this stubborn fact of economy before their eyes, they will not, we feel satisfied, hesitate to afford the necessary accommodation for the few additional cases above referred to.

Before closing our notice of this excellent Report we should state, that the payments of the year amounted to £6917 12*s.* 1*d.*;

and that, when reading the fiscal portion of the Report, we found, to our surprise, classed amongst the "provisions" "tobacco and snuff" to the amount of £38 8*s*. 5*d*.

9. Mr. Ley, the Resident Medical Officer of the Littlemore Lunatic Asylum at Oxford, in his Report for the year 1853, states, that during the whole year "buildings, and other works, had been in course of completion, thus causing excitement, and interfering with the discipline so desirable to be maintained amongst both patients and attendants." This asylum has not been in operation more than nine years, being opened in August, 1846; a comparatively short period of time for the original accommodation provided to be found insufficient; and showing, accordingly, one of two things,—either that insanity must be greatly on the increase, or that much miscalculation was made in the first instance, as to the prospective requirements of the institution from an increasing population, and the yearly multiplication of chronic cases; the latter of the two causes being the one which we think is in question as regards the Asylum under consideration, and in others having to enlarge their borders so soon after being built. And, unquestionably, it must be an evil of great magnitude, where, of all other institutions, an asylum in actual operation is obliged to be completely disarranged in its daily, nay, hourly routine, by the presence of strangers, and the noisy and irritating proceedings of tradesmen and workmen, of every degree, employed in erecting buildings and making alterations in the midst of such an excitable community. It is to be hoped that the entirely new asylums now in progress of erection, and to be erected, will not be permitted to perpetuate this evil further by not being built sufficiently large, so that hereafter increased accommodation in them can be had without any such serious inconveniences as those which we have now referred to. At the termination of last year this Hospital for the Insane at Littlemore, near Oxford, for the counties of Oxford and Berks, had within its walls a total number of inmates of 394,—170 being males, and 224 females. The discharges in recoveries for the year were 39,—21 males, and 18 females; the deaths 34, a diminished number as compared with last year, and exactly equal as to sex, which is not usually the case, a much larger proportion of males comparatively falling victims to insanity than females. On referring to the obituary statistics, which, as usual, are very complete, we find that 11 of the deaths, the largest proportion of all the other causes assigned, arose from epilepsy in a simple or complicated form, 3 males and 8 females. Phthisis comes next,

the cases of which were 4,—2 and 2. Three inquests were held during the year, two being on criminal lunatics, and one on an ordinary inmate who died of concussion of the brain, arising from falling violently forward on the stairs when going to bed, the deaths of the former being from natural causes. Two escapes of males occurred during the year, one of whom was a criminal lunatic,—another proof of the insecurity and unfitness of an ordinary asylum for such characters. The total outlay of the year was £10,762 4*s*. 10*d*., being at the weekly rate of 8*s*. 9*d*. for each inmate. Tobacco and snuff, we are sorry to see, are still in large consumption in this and similar institutions, the amount expended here in the deleterious weed during the year being £53 12*s*. 2*d*. With this exception, the Littlemore establishment, under the able conduct of Mr. Ley, is deserving of every praise; indeed, a peculiarity in its management makes it eminently so, being without the tender mercies of that class of official and generally officious ladies termed matrons,—a housekeeper simply being employed in it, as we hope will be the case ultimately in every asylum, the "genus matron" disappearing from them for ever,—the name always reminding us too forcibly both of the gaol and the workhouse, where, no doubt, their services are indispensable; not so, however, in hospitals for the treatment of insanity, in which there should be one head, and one only, for the *whole* establishment. We have been very painfully reminded, within a recent period, of the baneful consequences of interference on the part of lady officials, by which an *imperium in imperio* was endeavoured to be established, so destructive to all sound discipline and good government, and which in this instance had a most melancholy and deplorable result, but to which we shall not further refer on the present occasion.

10. The American Journal of Insanity for October, 1853, opens with an article "On undescribed Forms of Maniacal Disease," by Dr. Ray, the Superintendent of Butler Hospital, Rhode Island. In this paper, which was read before the Annual Meeting of Medical Superintendents of American Institutions for the Insane, held at Baltimore, May 10, 1853, the author discusses, with much minuteness and ability, a communication made by Dr. Bell to the above Association with reference to a form of maniacal disease which had never been distinctly recognised, the reading of that paper giving rise to this one by Dr. Ray. The characters of this new form, which distinguish it from mania, are:—1. Delirium rather than mania characterizing the mental disturbance; 2. Appetite and

digestion in mania are usually good or preternatural, where the system is undisturbed by medicinal agents; 3. In mania, the sleep, however much abridged, is still existent; 4. Mania scarcely, if ever, has a duration of two months, is preceded by strangeness and other doubtful signs, rarely, if ever, having a decidedly acute onset, and perhaps is always followed by a period of depressed spirits; 5. Mania rarely, if ever, terminates in death, while this is a very fatal form of disease; 6. The bodily strength in mania is maintained from first to last. Here the immense collapse, except under the wild although confused excitement of apprehended danger, is presented within the first few days—perhaps from the very earliest token of disease. Dr. Ray observes that the characters above attributed to mania are unquestionably found in a great majority of cases, but in regard to each and to all, the exceptions are not infrequent; and after giving a number of cases from his own case-book, having more or less affinity to those of Dr. Bell, but differing in some particulars, and further discussing the general subject, concludes by remarking upon the frequent association of extreme asthma with acute cerebral disease, and the unanimous testimony in favour of a stimulating treatment as the only one promising the least success in this class of cases, as was the opinion also of that eminent and sound practitioner, Dr. Abercrombie, as set forth in his work on Diseases of the Brain.

The other contents of this Number of the American Journal are of a generally interesting nature, amongst which is a review on foreign asylums, where we find some remarks upon the internal constitution of British asylums, to which we would wish to give insertion from their justness, and their being in perfect unison with our own, but we can only afford space for the annexed extracts, which occur in a review upon the two first Reports of the Wilts Asylum:—

"It is matter of regret that the Committee of the Wilts Asylum have adhered to the old plan of making the inferior officers more or less responsible to themselves, instead of making the medical superintendent in all respects the head of the institution, holding him responsible for the acts of inferior officers, and making them subject to his direction alone. The steward, matron, and farmer, are 'under the control of the Committee of Visitors and the medical superintendent.' This division of authority is not considered in this country favourable to efficient discipline. In relation to attendants, the superintendent 'shall have authority to recommend the hiring and discharge of all attendants and servants, and authority to suspend them whenever he shall deem expedient.'

"The 'authority to recommend' gives the superintendent no power further than that which belongs to any common citizen, and the power to 'suspend' places him in the humiliating position of appearing before the Board as the accuser of his attendants, giving the Board the right to act as they choose. This position no governing head should be compelled to occupy. The superintendent shall superintend and direct the performance of the duties of the attendants and servants, and also those of the medical assistants, clerk, and matron, so far as they are not provided for by the rules. If he is the governing head he should have the power to enforce obedience to the rules in all cases. In the regulations there are many small things which it would seem scarcely proper to impose upon a high-minded and intelligent officer. We notice one instance. The medical superintendent 'shall never absent himself for more than one night without the previous written consent of one of the Committee of Visitors, and then only on condition of his providing for the proper performance of his duty during his absence.' It would appear that a medical officer charged with the responsibility of such an important trust could not need such restrictions, applicable only to *apprentices*."

11. It is now an almost universal practice, in the conduct of lunatic asylums, to issue Annual Reports on the state of the inmates, the finances, and other particulars relative to the management of these institutions. This practice is good even as a local and temporary expedient; but, viewed by the professional eye, it is most important; for the accumulation of medical statistics respecting the forms of disease, the ages, the causes, the deaths, the duration of treatment, and the results of post-mortem examinations, in the course of time must afford abundant material for medical deductions of great value. We, therefore, hail with pleasure the periodical return of these pamphlets, and only regret that the statistical portion of their contents is not presented to us upon a uniform plan in all.

The Belfast District Hospital has been distinguished by the persevering, and, to a considerable extent, successful efforts of its resident physician, Dr. R. Stewart, in advocacy of reform in the management of asylums. As an instance in point, we may here allude to the gratifying fact, that while at one time, and that not distant, the superintendents of these institutions were very generally non-medical, there are *at present* but a rapidly decreasing minority of them where this principle is still maintained,—an important step towards realizing the just claims of the profession. In Dr. Stewart's excellent Report, there are several topics introduced which have, at the present time, a special interest. The importance of separating the *criminal* from other lunatics, by isolation in distinct establishments, is strongly insisted on. It appears that five patients of the criminal class are at present inmates of the hospital, though the proper place for their safe custody is, *by law*, the Dundrum establishment. Dr. Stewart notices his experience of the result of an increased dietary instituted in 1852, which, he says, has improved, in no inconsiderable degree, the standard of health. Considering that a vast proportion of the cases are the results of, or characterized by, physical debility, the necessity for a *good* dietary is self-evident; and we only wonder that such a salutary measure should have been so long delayed.

In connexion with the domestic economy of the institution, Dr. Stewart takes occasion to notice, in terms of just disapprobation, a change which the Board of Public Works has directed to be made, whereby the usual conveniences provided for and attached to each corridor, are to be superseded by a centralizing arrangement, which will have the effect of taking away the attendants thrice daily for indefinite times from their own immediate sphere of duty, and thus give occasion to irregularity and disorder. We are surprised that the Board did not consult the superintendent, or better perceive the interests of the Asylum, before issuing their final mandates. The serious delay, too, in the finishing of the new buildings, is animadverted upon, the period by which they were to have been completed having already exceeded several months, and yet no prospect of being ready for the reception of patients. The Board of Public Works, the authority having the direction of such works, are certainly tedious to a degree in all that they take in hands connected with lunatic asylums in particular, as we have had occasion to notice in former reviews.

The chief topic, however, embraced in the Report is the *Chaplaincy Question*. Attached are all the official documents and proceedings which have passed between the Irish Government and the Board in connexion with this subject. So far as we can gather the facts of the case, it appears that the Board have declined to recognise the appointments of chaplains, further than to permit of their visiting certain of the inmates of their respective persuasions under the direction of the resident physician; and that they, in furnishing their usual estimate of expenditure, have refused to insert the amount of salaries for the chaplains. This state of affairs, on one occasion, led the Board into a disagreeable position, as the Privy Council in Dublin, in consequence of the omission referred to, actually withheld the sums necessary to meet the expenditure for two quarters until a considerable time after being due, whereby the contracts of the Board for provisions for the establishment were infringed. This matter still remains *in statu quo*. The chaplains are appointed to an office, for discharging the duties of which they expect a salary of £50 each. The money is banked, and remains untouched, the Board declining to be the medium of payment. How this affair will end it is not for us to say, but we can only reiterate the opinion we expressed last year, that, in the case of asylums, religion requires the co-operation of skill in determining the condition of the person in whom it can produce its beneficial effects, and the extent to which it should be applied, and that a clergyman, *unaided by the physician*, is not in a position to be intrusted with the religious management of the insane. The principle on which the Board have acted since 1843 was instituted by an order in Council, and this principle permitted of the admission of clergymen to visit in that character any patients of their own persuasion, and to celebrate divine service before such of the inmates as their respective clergyman *and the physician shall deem fit to attend the same.* It cannot be too strongly insisted on, that these asylums are *de facto* hospitals for the treatment of insanity,—that the inmates are patients placed under a course of medical management,—some curable, others ascertained (after some experience) to be incurable, but, nevertheless, susceptible of their disease being mitigated,—and all labouring under a malady which, in many of its phases, presents, as the results of necroscopical research will testify, distinctive evidence of physical lesion.

Were the effects of the indiscriminate administration of religious services merely nugatory, we would still express the opinion we have formed on purely medical grounds; but when the evidence of an experienced physician like Dr. Stewart goes to show that the regular ministrations of clergymen continue to manifest the very reverse of soothing results amongst the inmates, and that their professional attendance, except on special occasions and in individual cases, is anything but calculated to promote the recovery of the patient; and when to this opinion we are able to add the corroborative testimony of clergymen themselves, we cannot but conclude that the Board of the Belfast Asylum is supported by the best of all arguments in their opposition to the appointment of stated chaplains. In concluding this notice of an institution so admirably conducted as regards its domestic management, we shall throw out a suggestion which we trust its medical officers will receive in the same spirit with which it has been penned. We would fear that in this Asylum, as in many others, much that might be calculated to advance medical psychology is annually allowed to waste, in consequence of the omission of necroscopic examination, and the want of a medical *clinique.* We think the time has arrived when these desiderata should be supplied. Belfast is a rising

School of Medicine: it has its Medical College, with a tolerably complete staff of professors; it has a first-rate general hospital; an hospital for contagious diseases; a lying-in charity; besides several institutions for special purposes, museums, libraries, and a botanic garden; to all these the medical student has access, and every facility is given calculated to impart a thorough knowledge of his profession, save as regards mental diseases. We have no doubt, with the present efficient staff of physicians, such an arrangement could be entered into with the College authorities as might be desired. We append the following statistical Tables from the Report:—

“ GENERAL STATEMENT OF THE YEAR’S ADMISSIONS, &c.

	M.	F.	Total.	M.	F.	Total.
In Asylum, 1st April, 1853,				153	129	282
Admitted since, new cases,	32	44	76			
Do. relapsed,	2	2	4			
	—	—	—	34	46	80
Total under treatment during the year,				187	175	362
Discharged recovered,	18	29	47			
Do. relieved,	14	5	19			
Escaped,	1	0	1			
Died,	8	11	19			
	—	—	—	41	45	86
Remaining 31st March, 1854,				146	130	276
The total admissions less than last year,				20	24	44
Daily average number of patients during the year,						279·11
Do. for the year ending 31st March, 1853,						280·01
Annual average expense of each patient this year, including every charge,				£14	12	6
Do. for the year ending 31st March, 1853,				12	17	11
Being an increase of each patient this year of				1	14	7
Total expenditure for the year ending 31st March, 1854,,				£4082	2	1

“ TABLE XI.—CAUSES OF THE NINETEEN DEATHS WHICH OCCURRED DURING THE YEAR.

	M.	F.	Total.
Maniacal exhaustion,	2	4	6
Epilepsy,	1	4	5
General debility,	2	2	4
Paralysis,	1	1	2
Pulmonary disease,	1	0	1
Apoplexy,	1	0	1
	—	—	—
TOTAL,	8	11	19

12. The Second Annual Report of the Kilkenny District Lunatic Hospital is taken up in several of its commencing pages with the relation of sundry details respecting the admission of patients, monetary affairs, and other institutional matters, not interesting to the professional reader in particular; and, accordingly, we pass on to some of the other topics in contains, more immediately to our purpose. And what first has arrested our attention is the statement made that here, in an entirely new institution, a most important part of its machinery, so to speak, in the treatment of its inmates, is already pronounced by Dr. Lalor to be "nearly totally useless from the want of a sufficient supply of water."

Clumsy and imperfect, indeed, must the arrangements have been which thus soon are found inoperative for supplying an element which, of all others, should be provided abundantly, and this, too, with ease and certainty. A sum of thirty pounds, annually, it seems, is expended in keeping four of the patients working a force-pump to throw up water to feed "a very costly apparatus erected for the purpose of supplying warm baths," but all to no purpose. This, we presume, is another specimen of the superior skill of the Board of Public Works, whose knowledge and judgment in all that relates to the wants and necessities of a lunatic asylum are estimated at a much higher value by themselves than by any one else.

As a simple and easy remedy for the above serious defect, Dr. Lalor suggests that a steam or water-wheel should be attached to the pump. He also recommends the erection of a steam-boiler for cooking, laundry, and other purposes, another gentle intimation evidently that the Board of Works are again at fault in the provision made by them in the domestic departments of the institution in which for the next quarter of a century, at least, there should not have been any occasion for either alterations or refitments.

After making some general observations regarding the moral treatment of the insane, which evince much judgment, and speaking approvingly of the systematic assemblages of the inmates of the Kilkenny Asylum for enjoying music and dancing, with tea, and its adjuncts, bread and butter, Dr. Lalor says, "the majority, perhaps I might say all, of the patients are now better pleased with those parties than they had been with the tobacco and snuff, for which they were substituted, and they are decidedly more economical and beneficial." The reading of the above paragraph has afforded us infinite satisfaction, and we record it here to the great credit of Dr. Lalor We have repeatedly called special attention to this vicious practice (too common in hospitals for the insane), with the view of inducing medical superintendents to discountenance on professional grounds tobacco in any form, its use being so prejudicial to the patients, physically, mentally, and morally, our only surprise being how medical men can tolerate or sanction it under any circumstances. Dr. Lalor has now shown an example worthy of imitation. Another excellent arrangement in the Kilkenny Asylum, one which we have often thought would be most desirable to have universally practised, is that the patients, instead of taking their meals in separate parties in their respective day-rooms—

> "Take them in common in large dining-halls, that is, all the male patients together in one dining-hall, and all the females together in another, which is a reunion three times daily, of a nature somewhat similar to those festive dances and parties, the occasional introduction of which, at longer intervals, had been found of such service in this and other institutions. These every-day reunions, of a more homely and domestic character at meal-times, have proved of signal benefit here. The whole body of the insane are now far more orderly and well conducted at their meals than the most quiet classes had been when given their meals in classes in their separate day-rooms."

On looking over the Dietary Table of the Institution we were much surprised to see that no solid meat was allowed to the patients at their dinner meal; soup (of no great strength either) being the substitute, and this but on three days in the week, bread and milk being given on the other four. Now, seeing that the Kilkenny Asylum has taken a high stand in many important respects in its management, we cannot but call attention, and this strongly, to the utterly inadequate nature of the above for imparting nourishment to a class of persons now, without exception, admitted to require a good, substantial, and liberal diet to counterbalance the debilitating effects of the disease of which they are the subjects. We are quite sure that Dr. Lalor is the man to do his duty to his charge in this respect, and that he will accordingly see to it that this most important point in the every-day management of an asylum is duly attended to by the local authorities, who, we take for granted, will pay all deference to the suggestions of medical men on a subject exclusively their province, and theirs only, to advise upon. Dr. Lalor will excuse us for objecting to the term "idle men and women" which we see used as a reason, of course, for diminished allowances at regular meals to those so denominated,—a distinction which we feel called upon to protest against in a curative establishment such as an hospital for the insane, where all are patients alike, and none to be thus disparagingly designated. *Inertia* is one of the effects of mental disease arising from that debilitated state, mental and bodily, under which its unhappy subjects so generally labour, and surely they should neither be branded as 'idle,' nor stinted on that account. Reducing their supper allowance of bread from eight ounces to six ounces is 'too bad;' a practice which we trust will, on consideration, be discontinued. The statistical information in this Report of Dr. Lalor is well arranged, interesting, and full: the Tables extending to twenty-eight in all, three of which, however, are not properly statistical. We have already extended our remarks so far that we have only left ourselves room to state that the number of patients treated during the year was 166 (92 males, 74 females); the recoveries 17 (12 males, 5 females); and the deaths 10 (5 males, 5 females), which latter, we remark, are classed under the head of "discharges," clearly not correctly, but which we often observe in the Reports coming under our notice. The expenses of the year amounted to £2735 13*s.* 7½*d.*, embraced in which is the sum of £23 3*s.* 6*d.* for "tobacco and snuff," for which we were not prepared, seeing that in the body of the Report Dr. Lalor has stated they had ceased being used; but this incongruity is, no doubt, capable of a satisfactory explanation.

13. Dr. Boyd has given a very elaborate Report, as usual, in reference to medical treatment, the special forms of disease, the assigned cause of death, and the exact post-mortem appearances of the fatal cases. In this he has exhibited an example of what persevering industry and system can accomplish; we have here the most minute particulars which can be reduced to figures. Every point that statistics can illustrate has been touched upon; and the only thing we can find exceptionable is, that the interests of the minute and statistical have superseded the more general and practical. Nevertheless, it is a fault we can the more readily excuse when we are assured that by such means eventually important deductions, throwing light upon the nature and pathology of mental maladies, may be formed.

We extract the following statement of the admissions, &c. &c., for the period embraced in this Report, and regret we cannot find room for more:—

"From the last Report it appears that, at the termination of 1852, the number of patients remaining in the Asylum were 342, being only an increase of 2 on the preceding year. In 1853 the admissions have been 69 males, 64 females, making a total of 133; of these, 7 males and 12 females were re-admissions. During the year there were discharged, 33 males, 30 females; and died, 28 males, 21 females; total at the end of the year, 363. One female patient is out on probation. One female imbecile, not a pauper, was lately admitted, under the recent Act, 16 & 17 Vict. c. 97, s. 60, not having been properly taken care of."

The year's expenditure amounted to £6750 9*s.* 6*d.* The cost of tobacco for the year, we are concerned to have to state, was £46 16*s.* 6*d.*

14. Dr. Skae is another of the medical superintendents of lunatic hospitals who has paid particular attention to the post-mortem appearances. In a large proportion of the deaths he found increased vascularity, or chronic inflammatory appearances of the meninges, together with a peculiar softening of the gray substance most usual in cases of general paralysis; and as to the density and absolute weight of the nervous centres, he has arrived at the following important conclusions:—1st. That the latter is increased in the insane. 2nd. That the cerebellum is heavier in proportion to the cerebrum in the insane, than in other cases. 3rd. The density is increased in the insane, and that of the cerebellum in greater proportion.

"If these conclusions are borne out by further observation, they may lead to curious and interesting speculations as to the functions of the cerebellum, and the influence exercised through this organ over the regulation and control of the thoughts, as well as those (hitherto attributed to it by some anatomists) over the voluntary muscular movements."

Dr. Skae's remarks on his general line of treatment are clear, practical, and divested of all scholastic mysticism; we cannot do better than close this notice with an extract from his pen:

"In regard to treatment, I may repeat in general terms, that I have continued to derive the greatest amount of benefit in acute and recent cases from the employment of the prolonged warm bath, accompanied by cold effusion on the head, in some instances the effects being almost sudden, and in not a few very rapid and permanent. The judicious use of opiates in another class of cases, and the removal, by appropriate remedies, of local affections in others, are the next sources from which the greatest amount of benefit from medical treatment has been derived. In a very large class of cases brought to the institution, the disease has supervened in persons of a scrofulous and feeble constitution, upon habits of over-exertion, combined often with insufficient nourishment, poverty, and anxiety; and in these a generous diet, and a moderate allowance of stimulants, have been found of great efficacy in the removal of the disease. The beneficial influence of a liberal diet, and a liberal allowance of malt liquors in the treatment of the insane, has been fully proved by the statistics of the various asylums throughout the empire, the proportion of recoveries bearing a very remarkable relation to the dietary and the amount of malt liquor comprised in it.

"In the treatment of patients, on the other hand, whose disease has been brought on by the excessive use of whiskey, wine, opium, and other stimulants, I have not found in those cases where it has been adopted any bad effect to result from the sudden and total cessation of their use; but, on the contrary, it appears to be the method ultimately most agreeable to the patients themselves, the complete suspension of the stimulants being followed within a very short time by a complete absence of the craving for them."

"GENERAL RESULTS OF THE YEAR.

	M.	F.	T.	M.	F.	T.
Number of inmates at the close of 1852, . .				275	268	543
Admitted during the year 1853, ...				103	133	236
Total number under treatment, ...				378	401	779
Discharged, .	79	78	= 157			
Of whom were cured, ...	58	50	= 108			
„ „ uncured, . .	21	28	= 49			
„ „ died, ...	36	41	= 77	115	119	234
Total number at the close of 1853, ...				263	282	545"

Twenty-four of the deaths, we observe, arose from phthisis, thirteen from general paralysis, and the same number from "exhaustion." The total expenses during the year were £15,240 6*s*. 3½*d*.

15. It is now, we find, forty years since the Norfolk County Asylum was first opened for the reception of lunatics, and exactly forty years has it taken to produce *one* scientific contribution to psychology, in the shape of an Annual Report of that institution. If we had inquired of an English physician, conversant with the treatment of the insane, as to the state of the Norfolk Asylum a few years since, all we might expect to learn is, that the mortality was notoriously high; that until 1846 there was no resident medical officer; and that there were "other serious defects in connexion with the want of a proper amount of land for the exercise and employment of the patients"[a]; and that it has as director or master a man who had

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[a] Dr. Thurnam's Statistics.

been selected because he was accustomed to *paupers*, having filled the offices of a Workhouse Master and that of a Keeper in a lunatic asylum respectively[a].

But we should be able to learn little else respecting its government and economy, except we were to consult a volume written[b] by Dr. Hull, the Senior Physician to the Norfolk and Norwich Hospital, who refers in a cursory manner to the state of this County Hospital for the insane, and the evil of a non-medical director. Thus he says: "How is it that insanity, complicated with the bodily and mental functions, can be treated successfully but by the constant daily, hourly surveillance of the medical philosopher?" "A big, brave, burly governor might be well employed for his physical force, *under* a physician. But how can his Bœotian brain appreciate the delicate machinery of the human mind?" "How can he, coarse and *material*, know how to vary, to adapt, his intercourse and colloquies to the numerous and discrepant forms of morbid intellect?"

Such a condition last year no longer existed in the Norfolk County Asylum; a new state of things during the last twelve months had arisen. The Norfolk Asylum, which was formerly looked upon as a prison, had assumed the position of an hospital for the insane; and the amount of mortality was thereby diminished, the cures increased, and the number of permanently chronic lunatics in the county, as a necessary result, diminished. Of this anon.

The Report before us contains an account of the admissions, which have been 83 in the year; many were in a most feeble condition; the deaths were 36, or 11·7 per cent. on the average number resident, 304; and the cures 46 per cent.

Under the head of "Construction and General Arrangements," it appears that the medical officers were so unreasonable as not to consider the Asylum *perfect*, as they state, "like all human institutions, it is as yet not perfect,"—a fact, to our minds, of peculiar interest. We think, certainly, that a part of the general arrangements, which allowed the resident physician £100 per annum, is decidedly not "yet perfect;" and hope the governors will see the absurdity, if not downright insult to the medical profession, of paying a subordinate official, the steward, £150 per annum for attending to the soap, candles, kitchen, &c.

The Asylum, it appears, is very much crowded with its present number of inmates, amounting to 300; the ventilating apparatus is stated to be very imperfect; there is no amusement-hall, or corridors for the exercise of patients in the cold days of winter. There is a deficiency of baths; the chapel is small; kitchen ill placed; officers deficient. Dr. Foote, the late intelligent resident physician, points out in this Report the absolute necessity of a total change of construction and internal arrangements, and, we would add, general government.

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[a] See Lancet, for April, 1853.

[b] On Determination of the Blood to the Head. 1842.

The medico-moral treatment which was introduced during the past year is referred to: the diet had been greatly improved; night attendants, and an extra day attendant, had been added; employment had been sufficiently encouraged, but not carried to excess; and the caution necessary against this point is forcibly noticed. Arrangements of various kinds had been made; a greater amount of liberty beyond the walls of the Asylum, music, &c., had been introduced; and thirty acres of land purchased for the patients; and so far the changes effected have been in the right direction, but still much remains behind to bring the Norfolk Asylum up to what it should be.

Dr. Foote, we should specially observe, enters most fully into the medical treatment of the insane. Three points strike us as of peculiar importance, upon which his views are clear and decided. As to diet, he says:—

> "It has been unquestionably proved by the best of all means, viz. by long and well-tried experience, that a good and liberal dietary is necessary for the insane. A scale of diet above that which the person would take if well, and surrounded by the comforts of home, is required by those who are confined in an asylum. The disease which affects the patient is generally one of asthænia: there is a diminution of vital power in the various functions of the body, therefore food of easy digestion, nutritious, and even stimulating, is required, which must again differ, according to the class of individuals for whom it is intended."

The influence of *association* is forcibly instanced in the following paragraph:—

> "There can be but little doubt that the early treatment experienced by a patient on his entrance into a lunatic asylum in many instances determines the future career of the disorder. The class of persons with whom he is placed both by day and night; the occupation, amusement, or otherwise; and the administration of medicaments or the withholding of them, according to the peculiar nature of the cases, are matters of the utmost importance to the man whose nervous system has received a severe shock."

Dr. Foote has also remarked on the influence of discipline, and has employed it in somewhat military fashion with good effect.

> "A large number of the imbecile and idiotic have been drilled to march in order, and have been stirred to useful exercise and regularity of dress. It is when standing in rank and file that many attempts are made, even by the violent, to keep themselves controlled, and to appear as steady as possible; it is here that an absent shoelace, dirty or torn trowsers, and an ungainly hat, may be put in comparison with those which are cleanly and neat. Any particle of self-respect may be aroused, and the smallest amount of mind may here often be noticed by the careful observer. Great control is gained over the patients, and the task of taking a vast number to a distance from the Asylum for air and exercise becomes comparatively easy."

We cannot conclude our notice of the Report of the Norfolk Asylum without animadverting in the strongest terms on the disgraceful and insulting manner in which the active, intelligent, and able member of our profession, lately its Resident Medical Officer, has been treated by the Visiting Justices of that institution. We now refer to the summary and, from all that has as yet transpired on the subject, most unjustifiable dismissal of Dr. Foote, a gentleman of the greatest promise in the special and important branch of the profession to which he has attached himself, and whose peculiar fitness for the discharge of the responsible duties of a psychological physician his Report, which we have been reviewing, so eminently testifies.

We ask, in all seriousness, has it come to this, that a mere clique of country justices is in these days to presume to insult a whole profession, by passing judgment after this fashion upon a most meritorious and painstaking officer, and endeavour, by their unjust act, to blast his future prospects?

We write deliberately, and after due consideration of all the facts and circumstances in connexion with this dismissal which have as yet appeared before the public. And what are they? Simply these: that a mere section of the Visitors took upon themselves to deprive Dr. Foote of his situation, not for the commission of any immoral or criminal conduct upon his part, as might naturally be supposed when the punishment was so great, but because he would not submit to an inferior officer, and permit him to violate the orders Dr. Foote had given in the discharge of his duty to the patients, for whose health and care he was the responsible officer. We think the time has fully come when the Secretary of State should cause a strict and solemn inquiry to be instituted into the internal government and condition of this now notorious Asylum, one in which Dr. Foote has not been the first sacrifice to please a merely secondary officer and his wife, the matron. Bethlehem, about which so much commotion was made on a comparatively recent occasion, was not in nearly so bad a condition as this Asylum: we hope, therefore, that the authorities will do their duty to it as they did to the former, and that a total change of management will follow, for which justice to the poor inmates so loudly demands. On every account the institution should be placed in the charge of an able professional superintendent, vested with "paramount authority," and who should be subject not to one, or two, or three meddling Visitors, but "to the Committee collectively," as the Commissioners in Lunacy so properly recommend in their Report, which we have just reviewed. Having made these remarks, we append a copy of Dr. Foote's letter to the Magistrates of the Norfolk Asylum, which speaks for itself, and to which no reply has since appeared:—

"On Tuesday last, the Committee of Visitors at their meeting, at which four only were present, called upon me to resign my appointment, in consequence of conclusions which they had formed in reference to my conduct; I having laid before them circumstances in which I considered that my directions as to the treatment of patients had been disobeyed, and myself grossly insulted. As I feel it a duty which I owe to myself, and as I believe that the future treatment of the patients of this institution is greatly concerned, I feel bound to lay the facts before you. I will state as briefly as possible the reasons which the Committee assigned for such a demand; for I was, I consider, acting strictly up to my duties, and interfered with unnecessarily in the treatment of my patients by non-medical officers of the institution; and I believe that the Committee would not have arrived at the same conclusion had they acknowledged that, as far as the treatment of patients is concerned, the medical officer should not be interfered with by the steward superintendent, and matron. The whole number of Visitors had not been summoned to consider the matter as I proposed; this was objected to; but those present stated, that the frequent disagreements between the superintendent and myself, had alone led them to arrive at their conclusion. I asked the Committee if ever I had in any way broken the laws of the institution, and *whether I had not entirely* fulfilled my duties, points which they did not attempt to deny. I will now state the circumstances under which the demand of resignation was made. I have always objected to male persons being indiscriminately admitted into the female sick wards where patients are in bed, for it occasionally happens that no one but females and the medical officers should enter. On Sunday afternoon, one of the female attendants, named C., admitted, without my knowledge, and in the absence of the matron and superintendent, a male and female stranger into the female sick ward, where there was in bed a patient, E. P., who has lately been very ill with uterine disorder and much excitement; and also a female attendant, B., suffering from uterine hemorrhage for the previous fourteen days, whose life has been in great danger. I have on more than one occasion stated my objections to the sick attendant being disturbed by the intrusion of any one into the infirmary, except the matron, deputy matron, and the nurse who had charge of her.

"I have more particularly expressed my disapprobation as to the visits of C. On one interview which I had with the matron, I told her that C. had, on the previous evening, caused much excitement in the sick ward among the patients, from the way she talked to attendant B.; and desired that she might be kept away, as her conversation had considerably excited P., though talking with B. This order was known to the matron and all the female attendants.

"It is not now necessary for me to say, that I reproved attendant C. for disobeying my orders, by entering the infirmary contrary to my wishes, as I had previously told her that I wished her to keep out of the infirmary. When the steward superintendent returned on Sunday evening I informed of what had taken place, and the excitement produced upon the patient P., by the presence of the male stranger, and the female attendant C.

"Notwithstanding this, on Monday C. continued to enter the apartment, and stated in the sick wards publicly to attendants and patients, that she had *orders from the superintendent and matron* to go into the infirmary as often as she liked, and that the *medical officer had no business to give any directions to the attendants.* The result of the perseverance of this person to enter the room (time after time) considerably excited both patients P. and B. on former occasions. At half-past three, P. M., the nurse to whom E. P. belonged came to report the state of P., &c., produced by the frequent entrances of C. Whilst she was reporting to me the state of these patients, C. again entered, the matron standing outside the door, as she stated for the purpose of watching P. The irritation of the patient was now considerably increased, and P. insisted on leaving the room, but was prevented by the matron, who called immediately to her assistance two other attendants, who took this delicate woman to a room, where they locked her in.

"On receiving instructions from me the nurse returned. She found P. was removed; *a patient had fainted, another much excited, and B., the sick attendant, in hysterics.* The infirmary nurse returned to me; I immediately saw P. and ordered her a bath at 70° Fahr. Finding that I had entered the ward, the matron brought her husband, the steward superintendent, and two female attendants—one, C., who had been the cause of this excitement, and another, P., who had, on a former occasion, caused much disturbance to the patient P. I was told, in the presence of these two attendants, in the hearing of the infirmary attendant, and some patients, that my conduct was not that of a gentleman, and that he, the superintendent, would not allow me to do as I thought proper. The matron said she must have the patient kept in seclusion. I then ordered the two attendants to open the door where my patient was secluded. Being refused admission, I obtained a key and opened the door myself, and remained until E. P. was taken to the bath.

"She was afterwards, *by my orders*, moved by the infirmary attendant to her bed in the infirmary, where she now remains quite manageable, so long as the cause of excitement is prevented. In the presence of the two female attendants, and within their hearing, and in the hearing of patients, I was insulted by the remarks of the matron and superintendent; and by the latter I was called a 'humbug.'

"I was told by them that I had no right whatever to give any orders at all to the attendants, and that the Committee would support them. To show further how far the Committee should rely upon the evidence, and whether I was not justified in my opinion, I have to state, that one was discovered by myself to have been, at twelve o'clock last night, in the grounds of the asylum, with another female attendant, in company with two male servants of the asylum; at the same time I also discovered the sleeping-rooms of two female patients unlocked, one of whom was not in bed, and the other walking about her room, not undressed, neither of which circumstances was known to the female night attendant who accompanied me. I further found that the approach to the female patients was quite free to the male attendants, and even from the road by scaling the wall, and there was nothing to prevent either of these patients escaping. The master and matron were in bed, but were called up to witness the ingress of the attendants who were out.

"I am quite certain that no man of mind and integrity of purpose will long hold the situation of medical officer in this institution, if the superintendent can insult him as he thinks proper, and oppose him in the treatment of his patients; and if he has not entire control over the superintendent, matron, and servants of the asylum. It must appear to any one of proper feeling, that a female sick ward should be one of strict privacy, and not be entered by male persons, and certainly not when the medical officer considers that such entrance may place in jeopardy the lives of his patients, or in the slightest degree retard their recovery. I have omitted to state that I have repeatedly objected to the seclusion of this patient, E. P., when the matron has importunately desired it, as I have seen the sad effects produced upon her by it, and as she was easily managed by the nurse to whom she belonged."

16. Dr. Noble's pamphlet, containing three lectures on "The Correlation of Psychology and Physiology," is a reprint from the Association Medical Journal, and accordingly need not occupy further attention on the present occasion than the ob-

servation, that the lectures in question appear carefully prepared, and contain, in a small compass, much useful and important matter on their respective subjects: the first of which has reference to the physiology of the brain and nervous system, reflex function, office of the great sympathetic, sensation and the respondent movements, and the physical appetites; the next is on emotional sensibility and its reaction; and the third and last, on ideas and their dynamic influence: all three lectures being very interesting, and from an attentive reading of which much valuable instruction, we may safely promise, will be obtained.

17. In reading the Annual Report of the Royal Perth Asylum to June, 1854, we could not but feel that the order of things had been strangely reversed in it, the directors—a respectable body, we have no doubt, in their locality—taking the most prominent place, by monopolizing the first ten pages of the twenty-three to which the Report extends, partly in relating the wholesale change of officers during the year, not fewer than *four* having resigned, which appears very inexplicable in such an institution, and must have been extremely prejudicial in its effects upon the inmates. Another portion is called into requisition in extolling their establishment in such terms as these:—"There is no institution in the kingdom that can possess greater advantages than the present for first-class patients." And not content with this, these gentlemen positively soar into the moral ecstatic by the description they favour us with of their right "royal" Asylum's "salubrity of situation—extraordinary richness and variety of scenery, embracing the lofty and commanding Grampian and other mountains—mountain torrents to the ocean—wide campaign country—beautiful plantations—moorland and cultivated fields." Had these directors confined their attention to the 'sublime and beautiful,' such as the above, we would have let it pass, as perhaps only allowable in enticing "first-class" patients to their Elysian retreat; but when we find them going beyond their own proper sphere by discussions upon insanity, and giving their opinions so flippantly as to the cases that may or may not "be advantageously allowed to remain with their family or friends;" about "delirium being but partial and temporary;" the cases in which "seclusion may be useful, but not indispensable," associating themselves with Pinel, Esquirol, and Willis, in pronouncing upon the "management of the insane,"—we think it high time to protest against such an assumption of the functions of the medical officers of their institution. Let these magni-

loquent directors apply themselves to their own proper duties a little more attentively, and all parties, we are sure, will be much better satisfied, and their institution be more satisfactory in its details, in which at present it is miserably deficient, the directors not favouring the public with the slightest information as to the way in which they appropriate the large funds at their disposal,—a deficiency which, we believe, is without any precedent in such an establishment as theirs, and one which we feel surprised at being permitted to continue. Having given this hint to the directors, we may observe that the Annual Medical Report informs us that, at the close of the past year, there remained 167 patients, since which 36 new cases had been admitted; that during the year 15 were dismissed cured, and that eleven had died. There is a great deficiency in this Report of the statistical information usually supplied in such publications, and to which we beg to call the attention of the medical officers, who otherwise relate the occurrences of the year with much interest in many respects to the professional reader, and whose patients, we are satisfied, are treated, as is stated, "with uniform kindness and attention."

18. We had marked a number of passages well worthy of quotation in the excellent Report of Dr. Browne (the distinguished physician of the Crichton Institution for the Insane), but we have space here only for the following interesting observations. In reference to that numerous section of patients who refuse food,—

> "During the course of the year twenty have been thus situated, and sixteen have for various periods been entirely supported by artificial alimentation. It is exceedingly probable that many hypochondriacal and eccentric individuals sink under a system of graduated starvation, an unpremeditated and guiltless suicide. A Christian Bishop is known to have fainted and died at the close of a rigorous fast. The asceticism of modern systems of diet, as well as the terrors of the dyspeptic, have proved fatal; and cases have recently transpired, demonstrating that abstinence is resorted to as a mode of destroying life, of concealing shame and poverty in privacy, and where there may be no other indication of disease except indomitable pride. The abstraction of the student, of all who are engrossed by intense emotion, by grief or ambition, produces the same result, even where nourishment is taken by interrupting or suspending the process of assimilation by first wasting, and then arresting the repair or reconstruction of the system. The emaciation of the pietist and philosopher is less a type of his etherealization, of the amount of his moral triumph, or of the internal struggle and the subjugation of the baser elements, than of inanition. The ma-

jority of the insane share in this preoccupation, this high-wrought exaltation of sentiment, and they share in this unconscious abstinence. Judicious treatment frequently consists merely in the disturbance of the mental concentration, and the administration of ample and well-selected nourishment. But with this invariable concomitant of certain forms of derangement, there is frequently associated voluntary, deliberate, determined refusal of food. The fatuous, the vegetative imbecile, feel not the suggestions of hunger, or forget to eat. The lethargic require to be roused from their apathy as from slumber, in order that the calls of appetite may be heard and listened to. The suspicious detect poison in the repast, and leave it untouched. The ecstatic is maintained by heavenly support, and despises and dispenses with the grosser appetites; the maniac has no time allowed to attend to such necessities, but lives upon himself, and declares that his strength increases as his indulgence in the infirmities of nature diminishes. The suicide, acknowledging the cravings of hunger, recognising the suitableness and attractions of the meal offered, and seeking poison and death for months and years, cherishes and abides by a painful but inflexible resolution to refuse food, and to resist its administration. It is probable that until forcible alimentation was systematically resorted to, the mortality of the insane was greatly augmented by this cause. A most unfavourable prognosis was formerly at all times pronounced in cases of melancholia combined with fasting. Experience shows that the purpose to destroy life is less permanent and protracted, however, than the desire to preserve it—than the mere aversion to what is loathsome and unclean. There is even established a habit of abstinence. Patients assist in feeding themselves with the stomach-pump who would defy and defeat all attempts to introduce a morsel into the mouth. In illustration of the omnipotence of habit, a youth may be mentioned who, without ostensible or appreciable motives, has abstained from food of every kind for six months, but introduces the tube into the stomach with his own hand, but who resisted the process when the instruments used were not those to which he had been accustomed. The case of a lady, adverted to in former Reports, has acquired additional interest. She has now been supported artificially for four years. Recently her malady has been complicated with epilepsy. On recovering from the excitement which followed the convulsions, she voluntarily, for two days, took the food presented to her. The impulse was either joy, or gratitude, or forgetfulness of her purpose, or the temporary restoration of intelligence. But convalescence has, with the former mental condition, brought back the dominant delusion. The initiative stage or suggestion of abstinence occasionally depends upon irritation or inflammation of the digestive organs. It has been removed by the application of a few leeches to the region of the stomach. More frequently it is associated with chronic disease of the abdomen, co-ordinate with insanity, which attracts and fixes the attention, rouses apprehensions, and engenders exaggerated and erroneous interpretations of painful sensations. More frequently still it is an act of the will, the result of a delusion unconnected with appetite or digestion. A new obstacle was recently presented to the beneficial application of these measures. A patient, after the administration of each meal, quietly and stealthily introduced a finger into the fauces, and rejected the contents of the stomach. The difficulty was overcome by allowing the individual to remain seated in the chair until the process of digestion had advanced so far as to render these attempts fruitless."

19. Dr. Bucknill's Report of the Devon Asylum for the year 1853 is a very judiciously drawn-up document, as might be expected from that gentleman, who holds a high position, and not more so than deserved, amongst his brother superintendents. We regret much that we cannot, on the present occasion, quote from its pages several passages of interest and value. We must content ourselves by stating, that Dr. Bucknill, with other eminent psychological practitioners (Mr. Wilkes, of Stafford Asylum, for instance, as will be seen in our notice of his able Reports), denounces the workhouse system of employment attempted to be enforced by some medical superintendents as the all in all for insane patients. Hear the opinion of Dr. Bucknill on this subject:—

"The useful and profitable employment of the patients has been carried as far as appeared to be consistent with their sanitary condition. The insane are, as a class, persons of more or less infirm bodily health. If in some cases no other animal functions are disordered, at least those of the nervous system are so; monotonous and laborious employments (especially such as are carried on within doors) are, therefore, not to be insisted on too rigorously. The taskmasters of the insane, if they would not sacrifice the primary objects of treatment, must be satisfied with a very moderate day's work."

On the subject of the medical treatment of his patients Dr. Bucknill says:—

"No efforts have been neglected which were requisite to maintain the medical treatment of the patients in proximity with the ever advancing steps of medical science. Among the novelties of treatment it may be mentioned that epilepsy has been relieved in the most satisfactory manner by tracheotomy; that dementia has been relieved by phosphoretted oil; that chorea with mania, threatening a fatal termination, has been cured by the internal administration of chloroform; and that extreme excitement, in which other remedies had failed, had been removed by frequent small inhalations of the same remedy."

The average number of inmates during the year was 460. The year commenced with 459 under treatment, and the total admissions for the year were 96, being nearly equal as to sex, and, contrary to what usually obtains, the majority were males (49), and the minority, females (47). The discharges in recoveries for the year were 55, and 6 relieved, the deaths amounting to 47 (25 males, and 22 females). The sum expended in the support of the institution for the year 1853 was £10,066 11*s.* 10*d.*, the amount for salaries and wages being £1636 13*s.* 8*d.* Provisions, £5055 11*s.* 8*d.*; necessaries, including coals and ironmongery, £1088 5*s.* 3*d.*; surgery and dispensary, wine, &c., £109 16*s.*; clothing and leather for shoes, £1324 5*s.* 1*d* ; coir and basket rods, £99 3*s.* 6*d.*; other items, £257 15*s.* 5*d.*; building and repairs account, £495 1*s.* 3*d.* Whether Dr. Bucknill sanctions the use of tobacco in any form in his excellent institution we are not informed; but, judging from the purely scientific principles upon which his treatment is based, we would be inclined to infer and to hope that he did not.

20. Mr. Wilkes, in the Thirty-third Report of the Staffordshire General Asylum, gives an historical sketch of the institution, commencing from the date of its origin in 1814. It appears that this Asylum is on a mixed principle, and gives relief to three classes of patients: one class paying a full charge; a second, a limited contribution; and a third, paupers. During the last thirty-three years 400 patients were admitted at low rates of payments; and for a period of twenty years the surplus profits derived from private patients of the first class were, in a great measure, appropriated to meet the ordinary expenditure of the institution, and diminish the charge of maintenance of pauper patients, who were in part supported by a county rate. Of late years the establishment has been greatly enlarged and altered, at an expense of £25,000.

In his remarks upon the classes of patients received into the hospital, Mr. Wilkes notices the gradual increase from year to year of incurable cases: and at the same time, in consequence, a diminished per-centage of recoveries. These facts are important, as very erroneous conclusions might be formed of the comparative mortality or success of different institutions, unless we take into account the influence of the circumstances alluded to. In the Table on the causes of death of 38 patients, we find that 23 died from disease of other organs than the nervous centres,—a fact which proves that insanity, like fever, requires for its proper management a thorough knowledge of every form of disease of which the body is the subject.

In the Thirty-fifth Report, Mr. Wilkes makes the following most judicious observations upon the use of bodily labour in the management of the insane:—

> "In the employment of the insane it is at all times necessary to use much care and judgment in regulating its amount and description by the physical condition of the patient. In recent cases it is especially important carefully to watch the effect of occupation on the patients, to avoid further reducing the too often feeble and exhausted powers and impaired health, by excessive labour on the one hand, or by too close confinement in the workshops on the other; and in adopting employment of any description it should always be borne in mind that its economical use ought to be secondary to the bodily and mental benefit the patients may derive from it.
>
> "Employment may certainly be considered one of the most important remedial means used in the treatment of the insane, and its judicious use should never be lost sight of. There can, however, be no doubt of the advantage of out-door occupation over every other: when cautiously employed, it not only improves the general health, and is a powerful means of diverting the mind from morbid impressions and delusions, but with those labouring under excitement the exuberant nervous energy seems to be expended in muscular action, and a directly sedative effect is produced, and sleep often obtained when medical means have proved unavailing."

21. The Royal Lunatic Asylum at Aberdeen holds no secondary place amongst the Scotch establishments, conducted as it is under the able auspices of Dr. Jamieson, formerly Lecturer on the Practice of Medicine and Medical Jurisprudence in the University of Aberdeen; whose lectures on insanity, as published in the Medical Gazette for 1850, we read when published, and considered both able and practical. In his Report, brought up to 31st March, 1854, he enumerates five forms of mental disease under which cases were admitted into the hospital, viz., amentia, mania, dementia, monomania, and melancholia, with the following definitions:—

Amentia.—Comprehending all cases of general defective intellect which have had a duration from birth, and requiring the care of an asylum.

Mania.—Marked by violent excitement, and morbid loss of control.

Dementia.—Implying loss, rather than defect, of mental faculty.

Monomania.—One fixed and special delusion or aberration of the judgment.

Melancholia.—A persistent, morbid depression of spirits, with vague or shifting delusions.

The medical results are stated to have been of a gratifying kind, as regarded the number of recoveries, which were 54 in all, out of a total of 378 under care and treatment during the year. The mortality for the year amounted to 21, 12 males and 9 females; an unusual circumstance connected with which was, that two-thirds of the deaths occurred in less than twelve months after the admission of the cases. Dr. Jamieson recommends the propriety of increasing the means of indoor employment, as also the enlarging of the grounds of the Asylum,—both being suggestions of grave moment to the welfare of the institution, and the carrying out of which should not be delayed. In looking to the fiscal portion of the Report, we regretted to see that the salaries to the medical officers, including the services of a visiting as well as those of a resident physician, amounted only to £334,—a miserable enough pittance, we must say, and altogether inadequate remuneration. We were very glad to see that, amongst the "creature comforts" for the patients, was an outlay of £152 8*s.* 6*d.* for "wine, spirits, and porter," which speaks well for the domestic economy of the establishment in such matters. No return is made for tobacco, so that we hope no countenance is given to this pernicious exotic in the Aberdeen Asylum.

22. The Third Annual Report of the Manchester Lunatic Hospital is another bombastic and self-laudatory production, somewhat in the Perth style,—evidencing, in our opinion, great want of taste on the part of its author, the resident medical superintendent.

By way of exordium we are favoured with a kind of would-be essay on insanity; and for a conclusion we are presented with numerous certificates of character of the medical superintendent—some of them written by his guests—which we have no hesitation in pronouncing as most unprofessional and undignified on his part, a procedure which we hope that others will not copy. The custom, too, which of late prevails, we are sorry to perceive, of blazoning forth in the Annual Reports of lunatic asylums the remarks made by official Inspectors and Commissioners, would, we hesitate not to say, be much better omitted; and accordingly, we fully agree with our respected contemporary, the Psychological Journal, that practices of this kind ought not to be persevered in, and that such reports of official visitations should be for the information and guidance of the local authorities, but not published and puffed abroad in the manner in which they are at present.

The general results of the year, embraced in this Report of the Manchester Asylum, are thus given:—

	M.	F.	Total.	M.	F.	Total.
Remaining under treatment, June, 1852, .				22	15	37
Admitted from June, 1852, to June, 1853, .				22	13	35
Total under treatment,				44	28	72
Discharged cured, ...	8	8	16			
„ relieved, ...	4	1	5			
Died, ...	3	1	4			
				15	10	25
Remaining, ...				29	18	47

There is no financial statement attached to this Report, which is a considerable omission, and which we hope to see rectified in future issues.

23. The great extent to which this our Annual Review on Insanity has run altogether prevents us from saying more of M. Morel's second volume than reiterating the opinion we expressed two years since on the first: instead, then, of analyzing the contents of the book, as we had intended to do, we must be satisfied with warmly recommending its perusal to all interested in this study[a]. The pictorial illustrations are ample value for the low price at which the two volumes may be obtained.

On the Etiology, Pathology, and Treatment of Fibro-Bronchitis and Rheumatic Pneumonia. By Thomas H. Buckler, M.D. Philadelphia: Blanchard and Lea. 1854. 8vo, pp. 150.

It is ever one of the most grateful privileges of the reviewer to encourage those who zealously labour in the cause of science. Criticism expects not perfection, and delights not in censure. To meet with the first lightens that regret which must be at all times experienced in inflicting the second.

We are informed Dr. Buckler's leading object in the publication of the volume before us is to point out, as clearly as possible, the distinctive characters of fibrous or rheumatic inflammation of the bronchial tubes, and at the same time to show the differential diagnosis between it and ordinary catarrh. "The next object is to show that there exists a form of pneumonia which is never idiopathic, but occurs as a secondary lesion, and is always symptomatic of, and directly dependent on, pre-existing fibrous bronchitis." The author proposes to treat of disease seated in the fibro-cartilaginous tissue of the bronchial tubes proper, which, existing between the mucous membrane and the parenchyma of the lungs, is composed entirely of fibrous tissue and cartilaginous rings, with some few muscular fibres. Dr. Buckler believes that the differential diagnosis between mucous and fibrous inflammation of the bronchi can be as certainly established as between that of the two similar tissues of the eye, the sclerotic and conjunctiva. Our own opinion respecting this analogy is neither flattering to the proposer nor confirmatory of its truth.

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[a] A prize of £80 has been awarded this year to the author for this work, now completed, by the French Academy of Medicine.

> "It cannot," writes Dr. Buckler, "be shown that our knowledge of either the etiology, pathology, or treatment, of bronchitis has improved at all since the observations of Laennec, whose work furnishes at this day the best systematic arrangement of the diseases treated of under the head of catarrh."

We are second to none in our profound admiration of the vastness of that genius and the accuracy of that research which has so deservedly immortalized the wonderful individual to whom our science owes so much; but at the same time we feel that, in ignoring the labours of his many worthy and zealous followers, we not only reject the evidence of every day's experience, but indulge a mistaken sentimentality that neither adds to the just honour of medicine nor truly represents the value of those opinions Laennec set forth. We admit we have no startling discovery to entitle us to be ranked by his side, nor can we, like Dr. Buckler, with conscious feelings write:

> "It does not appear that any medical writer, ancient or modern, has noticed the existence of any such disease as acute, subacute, chronic, idiopathic, or symptomatic fibrous bronchitis, and yet it will be shown that this affection is an entity as well marked as any other existence, and that it may be recognised by signs as clear and well defined as those which indicate a pleurisy or a pericarditis."

It is enough that we state in reply, though the complication of bronchitis with rheumatism has attracted the attention of many writers, amongst whom we may particularize Dr. Latham and the late Professor Graves, neither they nor those others, whose works may be relied upon as observant and truthful, bestowed so lengthened a name on their familiar acquaintance.

As no new disease could be respectably set forward without some means of support, we have this latter afforded in certain erudite observations on the vascular mechanism of the pulmonary circulation, a subject so hackneyed that we forbear to enter on its discussion. We shall not, however, deprive our readers of the proposition they originate:—

> "Suppose a healthy individual, struck down by a pneumonia, is found, on the second day of the disease, with more or less engorgement, and that his condition is marked by a cold surface, hippocratic face, and a lethargic state of the nervous system:—put him in a dry room, heated to 70° or 75° Fahr.; give him brandy, and bleed him largely, he will very surely recover; fail to do any of those things, and he will just as surely die."

Shade of Sangrado! what say you to this?

We pass the section on rheumatism and the rheumatic element, in which the disease is traced back to the reign of Augustus. To those curious in such matters it may prove more pleasing than profitable.

Eleven carefully observed cases have been selected, as presenting striking illustrations of the rheumatic law. We present our readers with the first case in full. We presume it is chosen from the author's experience, as being best calculated to convey to the profession the signs and tokens by which this hitherto unnoticed affection may be known.

> "Case I.—*The mildest Form of Subacute Fibrous Bronchitis,* January 4, 1852.—Mr. M^cN., a clerk in a dry goods store, aged 20, has had a very distressing cough and much headach for the last seven weeks, in spite of which he has been going about and attending to his duties as usual. After some exposure early in November, he suffered for a day or two with general muscular rheumatism, and slight pain in the left ankle-joint. In a short time the pain and aching in the limbs passed off, and he was seized with a harsh dry cough, which has continued, with greater or less intensity, until now. He has taken several cough mixtures, by the advice of his physician, and within the past two weeks has resorted to the use of nostrums.
>
> "Throat and pharynx healthy; pulse, 70; respirations, 15; skin dry. No trace of anything wrong about the heart or lungs, except a faint sibilant râle on the right side. Says it hurts him to comb his hair, and has tenderness over the broad tendon of the occipito-frontalis, and the fibrous expansion of the left temporal muscles. The sensibility is marked, and exactly limited to the outline of these fibrous sheaths.
>
> "5th. The urine, which has been rather more abundant for the past twenty-four hours than the normal quantity, is of a dark colour, has a specific gravity of 23, and is highly charged with crystals of uric acid and some urate of soda. He says that it varies very much, both as to quantity and colour; that one day it is pale, and the next day dark. Directed him to take a warm bath every

night at bed-time, and to avoid exposure to night air and damp days. To take a tablespoonful every sixth hour of the following mixture:—Phosphate of ammonia, half an ounce; water, four ounces; extract of the Actæa racemosa, half an ounce; and syrup of Prunus virginiana, four ounces.

"15th. He failed to take the bath, but he used the prescription with the best effects, and has had no cough for the past three days."

The elaborate details of this case savour much more strongly of the nonentity rather than the entity of that which the author would describe.

The second case is headed Subacute Rheumatic Bronchitis. Its peculiarities were cough without physical signs, succeeding exposure to damp and cold, the prescription ordered being as follows:—Phosphate of ammonia, half an ounce; water, six ounces; mix. A tablespoonful to be taken thrice daily; twenty-five drops of wine of colchicum being added to each dose of the solution.

In this case rheumatism became developed in the shoulder-joint, coincident with which the cough in a great measure ceased. Without wishing to detract from Dr. Buckler's originality in his descriptions of this and many of his other cases, we cannot refrain from affording him some consolation for his lamentation respecting the previous non-discovery of so important a disease by quoting from the Clinical Medicine of the late Professor Graves[a]:—"Now where the arthritic affection is very severe, and accompanied by high fever, the addition of bronchitis is a great aggravation. Every time the patient coughs he feels like one stretched upon the rack; at every convulsive motion of the chest a severe pang is felt in every joint, and the ordinary rate of suffering is increased to positive agony. A case of this kind is hard to be managed, even when the disease is recent and the constitution sound; but when you have to treat a severe attack in a person who has repeatedly laboured under the disease, and whose vigour has been consequently impaired, the difficulty is greatly increased. Here much attention is required on the part of the physician. Where the combination is met with in a primary attack, *I am generally disposed to regard both affections as of the same character, and not requiring any difference of treatment.*"

When the affection is chronic, and debility present, Dr. Graves has derived much benefit from a mixture, which, if we allow his non-acquaintance with the disease Dr. Buckler claims to have discovered, it must be admitted bears a very close resemblance to the prescription we have transcribed.

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[a] Edition by Neligan, vol. i. p. 492.

We forbear from a further analysis of Dr. Buckler's cases, and shall allow their author to believe that Graves was ignorant of, Latham imperfectly informed respecting, Stokes indiffeferent to, and many others deceived in, their estimation of a morbid combination, for whose treatment they have offered the soundest practical directions. Nor should we allude to the treatment Dr. Buckler advocates, were it not in many important particulars at variance with that, the high authorities we have mentioned, approve.

In his observations on depletion, the loss of a large quantity of blood is said to be of prime importance for the cure of pneumonia occurring in what is termed the rheumatic form. If the patient be too weak to sit up, Dr. Buckler directs that he should be placed in a semi-recumbent posture, and bled to syncope. It is, according to his opinion, all-important that one or two free bleedings be performed early in the disease:—

"For," to quote his words, "while the timely loss of blood may, in every instance, with certainty, cut short the primary mischief singly, the potency of depletion to relieve the original disease, and at the same time control the secondary inflammation in the one case, and the supervening engorgement in the other, is far less absolute." "The danger here is not from taking too much blood, but from the difficulty often experienced in procuring a sufficient quantity in time to afford relief; this difficulty may be overcome in many cases by the use of brandy and other stimuli."

In speaking of the free use of the lancet, Dr. Stokes, in his observations on the treatment of pericarditis, writes: "Boldness of treatment often betrays the timidity of the practitioner." Dr. Latham's observations on this point we recommend to our author's reperusal; from them he may learn that in abating vascular action by venesection, a shock may be communicated to the nervous system potent with new dangers, of a scarce less formidable character than that which it is intended to remove. That such venesection as Dr. Buckler advocates is by no means essential for the cure of cases similar to those which he has described, may be inferred from an examination of Dr. Stokes' recent work on Diseases of the Heart, where numerous examples are given of the most dangerous complications of pulmonary and pleuritic inflammation pending rheumatic fever, which a sound discretion successfully combated without resorting to such extreme remedies.

We conclude our observations respecting this work, assuring the author that our opinions have been in no wise influenced through reason of its rejection by the Committee of the American Medical Association on Voluntary Communications, for 1853.

Mémoire sur le Traitement de la Chute de l'Uterus par une methode nouvelle, &c. Par le DOCTEUR A. DESGRANGES, Chirurgien en chef de l'Hotel Dieu de Lyons, &c. Paris, 1853.

WE quite agree with Dr. Desgranges in his opinion, as to the descent of the uterus being incurable, that this is a surgical delusion: not only may it be relieved by mechanical means, but cases are on record of a radical cure. This, according to our author, ought to consist "in replacing the uterus in the pelvis, and maintaining it there without artificial support;" and that without compromising the life of the patient or having recourse to measures which, in case of failure, will leave the patient worse than before. Attempts have been made to attain this object by narrowing the vagina by means of cauterization, excision, and suture, and also by diminishing the vaginal orifice, or by uniting the labia.

Dr. Desgranges proposes to diminish the calibre of the vagina, and to render the uterus stationary by two entirely new methods. The first consists of a number of small forceps applied to the upper portion of the vagina, and allowed to remain until they come away themselves. The instruments he employs consist, first, of a number of small forceps with the blades crossed, like the tenaculum forceps of Sir P. Crampton. The points (A), which are sharp, are prominent, and cross each other, and the edges are rounded off, but the free extremity is armed with a prominent edge. The spring is sufficiently strong to make adequate pressure, without the instrument being too cumbrous.

In order to apply the vaginal "pinces," we have next a pair of forceps with a groove at their extremity, in which the outer end of the "pince" is to be placed up to the point where the blades bend in order to cross each other. The firm closure of the blades of this forceps presses open the points of the "pinces vaginales," and so enables us to apply them in situ without difficulty.

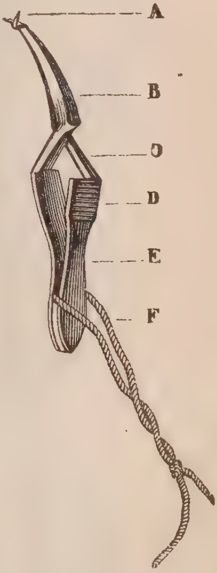

Fig. 1.

In applying these little instruments Dr. Desgranges makes use of the three-bladed speculum or of the gorget as a guide.

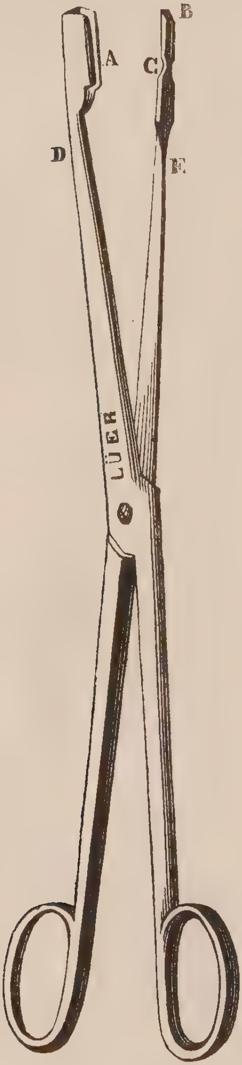

Fig. 2.

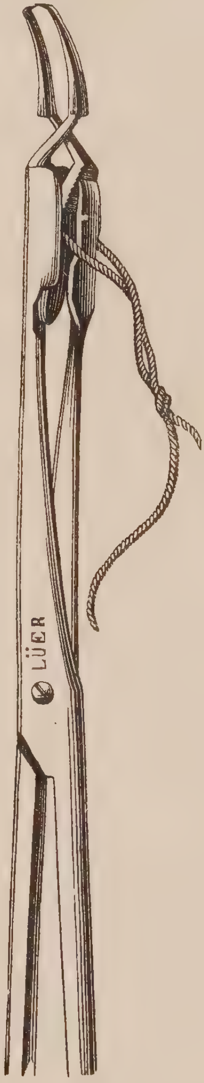

Fig. 3.

In the following plate the reader will see three of these small forceps applied to the upper part of the vagina. They should not merely seize the parietes by their points, but also by the curved portions of the blade, the convexity being towards the vagina, which it will hold firmly by the overlapping edge. The number of "pinces vaginales" to be applied will vary from six to nine, according to the state of the vagina, and it is better to commence with the posterior wall and the lower extremity of the vagina. When all are applied, the double T bandage is to be fixed, and the patient confined strictly to bed until the instruments come away, which is generally from the sixth to the tenth day.

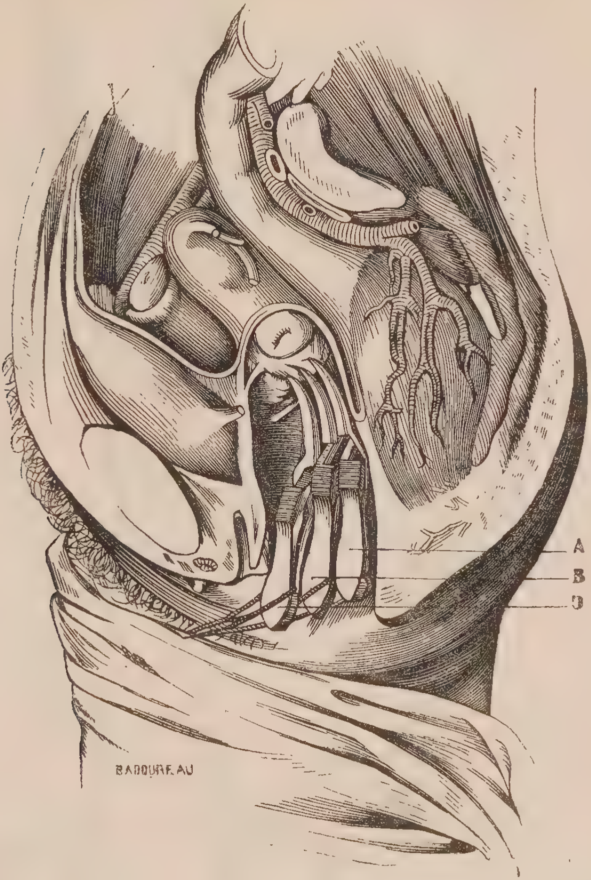

Fig. 4.

When the parts are healed, the operation is to be repeated, the instruments being applied to a different portion of the vaginal walls; and when the canal is reduced in size, the gorget or the fingers only should be used as a guide in applying the "pinces vaginales," as the distention by the speculum might be injurious. In this way, by the successive application of these instruments, and, as Dr. Degranges says, "mieux vant trop que pas assez," the calibre and length of the vagina are so much reduced in diameter that it is quite capable of supporting the uterus and preventing prolapse. There is very little irritation occasioned by the application, and the number of small cicatrices which are perceptible at first, diminish by degrees, and finally disappear; so that, as Dr. Degranges states, the operation does not interfere with any of the functions of this part. So much for the mode of operating. We have next a minute account of eight cases, of which six appear to have been completely cured by this method, and in two the relief was incomplete. If further experiments furnish similar results, which we think very probable, we shall have to thank Dr. Desgranges for an additional means of relieving a most unpleasant disease.

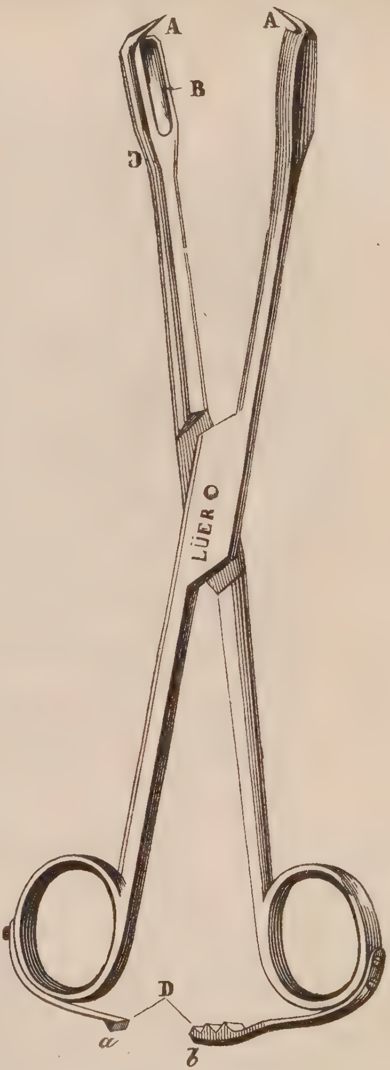

Fig. 5.

The second plan of Dr. Desgranges is a combination of mechanical pressure, and the application of caustic. The instrument consists of a pair of forceps armed with sharp points, below which is a receptacle for caustic; this is called the "pince

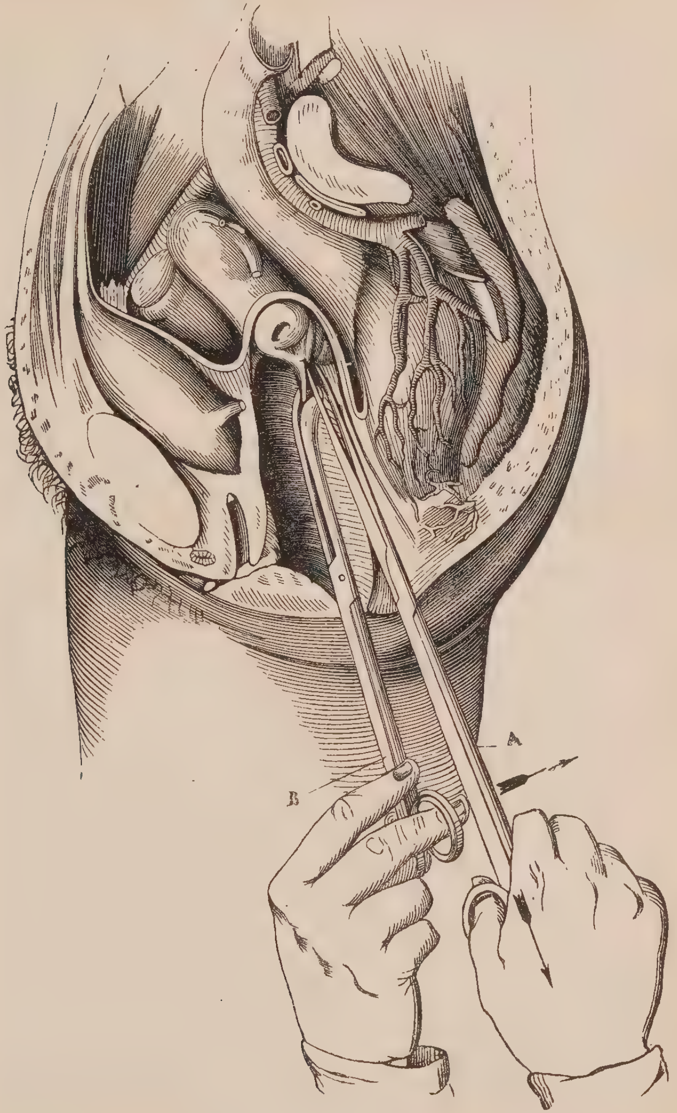

Fig. 6.

elytro-caustique," and its application is aided by a vulsellum with one point only in each branch. The caustic used by Dr. Desgranges is the chloride of zinc, for the action of which he prepared by a previous application of another kind of caustic (caustique Filhos[a]).

The operation is as follows:—

A fold of the mucous membrane of the "cul de sac" of the vagina is to be seized with the vulsellum, and drawn downwards, whilst the cervix uteri is to be pushed to the opposite side of the pelvic cavity; then the "elytro-caustique," guided by the finger, is to be applied as largely as possible to the fold of mucous membrane, and maintained so by the spring at its lower end. In about forty-eight hours the vitality of the portion thus included is destroyed, and a similar operation is to be performed on the other side of the cervix. After each operation a double T bandage is to be applied, and the patient confined to bed. Dr. Desgranges thinks that five or six operations may be necessary, but as no cases are given it is not clear that he has ever tried this operation.

Not having ourselves had an opportunity of trying or seeing tried these operations, we shall not venture an opinion, but content ourselves with extracting Dr. Desgranges' conclusions:—

I. Prolapse of the uterus, though difficult to cure, is not incurable. II. It may be cured by a union of means, which constitutes the new method. III. This treatment for prolapsus may also advantageously modify other displacements and flexions of the uterus. IV. The basis of this method is the constriction and destruction of folds of the vagina by means of "*pinces.*" V. The "*pincement du vagin*" includes two procedures, the first by means of the small forceps, "*pinces vaginales*," and the second by means of the "*pinces elytro-caustique.*" (A.) 1. *First Procedure.*—As many "*pinces*" should be applied in the first operation as possible. 2. They come away themselves from the fifth to the eighth day. 3. The number of operations varies from eight to ten; better more than fewer. 4. The treatment occupies about three months. 5. No deaths, no local disorder, nor general symptoms. (B.) *Second procedure.*—1. An "elytro-caustique" is applied on each side. 2. They are to be removed in forty-eight hours. 3. The number of applications and duration of treatment must be determined by circumstances. 4. No death; feeble reaction; no local symptoms. 5. The caustic in the grooves does not alter the plan, as its action is limited, and the forceps alone may succeed. 6. The chances of cure are greatest in young and healthy women, and in the absence of complications. 7. Considerable

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[a] See Neligan on Medicines, Fourth Edition, 1854.

"engorgement" of the cervix will require appropriate treatment; moderate "engorgement" need not interfere with the operation. 8. The cure is probably less owing to narrowing of the vagina, than to an organo-plastic process, which, extending beyond the organ, restores their lost tonicity to the utero-sacral ligaments, and to the areolar tissue of the pelvis. 9. The treatment does not prevent cohabitation nor fecundation, nor will it be a cause of dystochia. 10. If the cases are not sufficient fully to establish this method, they prove its harmlessness, and justify our hopes.

Rese-Anteckningar. Berättelse till Kongl. Sundhets-Collegium. Af Dr. C. G. GRÄHS, Med en planritning och flera träsnitt. Stockholm, Tryckt hos Joh. Beckman. 1853.

Notes of Travel. A Report to the Royal College of Health. By Dr. C. G. GRÄHS. With a plan and several woodcuts. 8vo, pp. 181.

WE have before had occasion to commend the liberality of the Swedish authorities in providing men of science with the means of proceeding to other countries, for the special object of studying and reporting on the institutions of the places they might visit. Of the wisdom of such liberality the work before us is an additional proof. As the Royal College of Health, in their resolution of the 13th October, 1851, by which they appointed Dr. Grähs to a travelling stipend, directed his attention, in addition to other medical studies, to two particular questions,—the one, the care and treatment of mental diseases; the other sanitary police and the state of legislation on the subject,—he has thought it his duty to devote his book to these two points. Having viewed the several great colossal institutions for the care of the insane, such as those of England and France, and witnessed the inconveniences which attend their administration, and which they present in carrying out the due care of their inmates, the author does not hesitate to declare his conviction, that Holland is the country from which the most instruction is to be derived, both in reference to the questions of organization and legislation, and to that of treatment,—particularly the treatment he had an opportunity of observing in Utrecht under the distinguished psychologist, Professor Schroeder van der Kolk. The fact that several of the author's predecessors have laid before the Royal College detailed reports of the state of the subject in question in Belgium, France, and England, &c., is quoted as an additional reason for his devoting the first part of his work to the study of the care of the insane as it exists in Holland: while the second part is occupied with the condition of public hygiene, and its attendant legislation and machinery, in London and Paris.

The author having drawn a lamentable picture of the fearful state in which the insane were kept in former times, shows that it is to Pinel the immortal honour belongs of being the first, in the commencement of the present century, to open their dungeons, loose their fetters, and to obtain for his suffering fellow-creatures due care and suitable abodes. The reform initiated by this great man in France was imitated in other countries; to Holland it was late in gaining access, but, perhaps, on this very account, it was there carried out the more perfectly.

The Code Napoleon was introduced into that kingdom in 1811, and when the country regained its independence a further slight improvement was effected by the ordinance of the 12th February, 1814; but it was not until the year 1840 that, in consequence of the urgent representations of Professor Schroeder van der Kolk, a project of law based upon his remarks was laid by the Government before the States-General, and was, after due examination and discussion, passed with some few alterations into the law of the 29th May, 1841, which has formed the basis of all the improvements subsequently adopted. As wise legislation is a necessary condition for the establishment of good institutions, the author thinks it well to quote the statutes in question at length. Among the most important points in them are the division of establishments for the insane (in a note he deprecates the use of all such terms as "madhouse," "Narrenhaus," &c.) into hospitals and asylums; the suppression and closing of such institutions as should on inspection be found unsuitable; the application of the new favourable law to the former, and of the old useless statutes in the civil code to the latter (which should gradually be removed); that the institution of new establishments of the last-named kind should be forbidden; and lastly, that the provinces in which no hospitals (Kuranstalter) could or need be organized should be compelled to enter into an agreement with the directors of such in other provinces for the care of pauper lunatics; by which arrangement provision was made for this unfortunate class throughout the entire kingdom.

In accordance with the law alluded to, measures were taken during the following year to gradually put in order one hospital after another, so that in the year 1848 there were six in excellent condition, to which in the course of two years five were added, one being entirely newly built (Meerenberg in North

Holland), the other ten rebuilt and reorganized. The old asylums, the number of which, in 1842, amounted to twenty or thirty, have been so far extinguished that but six remain, and in one of these there are only three, in another not a single patient.

The distinction between the hospitals and asylums is defined in the second article of the law just mentioned, where the object of the former is stated to be the restoration of the insane to health; of the latter, their separation from society.

The largest and most elegant of the institutions of Holland is that of Meerenberg, accommodating from 300 to 320 patients; next in order are those of Zutphen, containing 200, and Utrecht 120; the others receive a smaller number. In speaking of these establishments the author introduces a number of valuable statistical Tables, which, however, we cannot here reproduce.

These institutions are all organized on nearly the same plan, with that of Utrecht as the type. The Hospital at Meerenberg has the peculiar advantage of being situated in a beautiful country, while the others are located in towns. The author enters into a full description, illustrated with a ground plan, of the hospital at Utrecht; and in order to explain its internal arrangements he quotes some of the most important parts of the excellent and suitable instructions issued to guide the male and female directors in the discharge of the duties of their responsible office.

Dr. Grähs next proceeds to give a sketch of the opinions of Schroeder van der Kolk on the pathology and treatment of mental disease, deriving the information he thus brings before his readers from a triple source, viz., from some of the smaller essays published by the Professor; from his own notes taken during his attendance on the lectures on mania; and lastly from direct oral communications. Schroeder van der Kolk belongs, we are informed, to the so-called *Somatic* school, bases his views on profound anatomical and physiological studies, following in great part in the anatomical demonstration of the brain the method of M. Foville of Paris, and unites a very extensive use of the Materia Medica with the "moral treatment" of the French, and the "non-restraint system" of the English.

Schroeder van der Kolk rejects the ordinary division of mental diseases into mania, monomania, melancholia, dementia, and idiotism, because, although useful for the distinguishing of some peculiar forms, it is in fact less practical, as it is based on the symptoms of the disease, and not on its essence or origin. He adopts, as a more suitable arrangement, the classification of mental diseases into two great varieties,—idiopathic and sympathetic mania,—which it is of the greatest importance, in reference to therapeutic treatment, accurately to distinguish from one another.

By idiopathic mania he means that in which the brain is primarily affected, whether through excessive mental exertion and great irritation, or in consequence of any external injury, as a fall or blow, which, with the aid of more or less hereditary or other predisposition, may give rise to mental disease.

Sympathetic mania, on the other hand, is that where the brain is only secondarily affected, and the exciting causes must be sought in other parts of the body, especially in the digestive or generative organs, which form may, indeed, if of long duration, pass into the idiopathic, but is never cured without the previous removal of the more remote causes.

As we have already stated, the second part of Dr. Grähs' book is occupied with the consideration of the subject of public hygiene, its legislation and machinery. The author commences by showing, that there is scarcely any subject in medicine more important to mankind in general, and that, consequently, there is none of a nobler aim than that just mentioned. History, too, informs us, that even amongst the most ancient people, in proportion as they advanced in civilization, this important matter attracted more or less attention, and that rules and ordinances for the preservation of health were not only the result of legislation, but that with some they even assumed the form of religious precepts. In proof of this the author appeals to the various mystico-religious ordinances of the Egyptians and Chaldeans, to the dietetic and makrobiotic doctrines contained in the Bible and the Talmud, to the laws of Lycurgus in Greece, &c.; beside which may in practice be placed the well-known great achievements of the Romans in sanitary affairs.

During the middle ages, and subsequent epochs, it, however, came to pass, that this, like so many other sciences, was hidden under the veil of obscurity and barbarism, and was, in great part, consigned to oblivion, and even modern legislators, probably less fully convinced than those of former days of the connexion and mutual relation between physical and moral strength, neglected the part of legislation through which the latter insured health and vigour to their posterity. It was not until the most recent times, and until the natural sciences began to be more carefully cultivated, that the doctrines of public hygiene revived, which they did first in France, where chairs on the subject were instituted; and afterwards in other lands distinguished men began to devote themselves to this study in its full extent, or to certain parts of it, and many valuable works upon it have subsequently seen the light.

It was, properly speaking, during the last ten years, and especially from 1847 inclusive, that a new epoch occurred, that, namely, of the application of sanitary measures on a great scale, a change which owed its origin to an accurate observation of the most recent epidemics, and to the investigations this occasioned into the causes of excessive mortality, especially in large and very populous cities.

After these and some other prefatory remarks, the author proceeds to discuss some of the principal questions connected with public hygiene, confining his observations to what he had an opportunity of witnessing in London and Paris, the chief seats and cradles of the modern sanitary reform now taking place in Europe. He begins by tracing the progress of this reform in the former city, from 1838 and 1839, the dates of the reports on the sanitary condition and physical sufferings of the lower orders in London, presented to the Poor-Law commission by Drs. Southwood Smith and Arnott; the labours of Mr. Chadwick; the introduction of the Public Health Act into the House of Commons in 1845, and its passing into law in 1848; the passing of the Nuisances Removal and Diseases Prevention Act; and the establishment of the General and Local Boards of Health. The author translates the Public Health Act at length, praises the accuracy of the reports of the Registrar-General of births, deaths, and marriages, and describes the plan on which they are prepared. He next enters successively and fully into the several subjects of the water supply of London; the removal of impurities; ventilation, baths, and wash-houses; houses for the labouring classes; and extra-mural sepulture. The work concludes with a description of the sanitary condition of Paris.

In reviewing a volume which enters minutely into so great a multiplicity of details, we can do little more than describe its general arrangement, and the nature of its contents. We have, however, much pleasure in bearing our testimony to the fidelity with which Dr. Grähs has fulfilled the task assigned to him; his book is evidently the result of able and diligent investigation.

On Some Diseases of Women admitting of Surgical Treatment. By Isaac Baker Brown, F.R.C.S., &c. &c. London: Churchill, 1854. 8vo, pp. 288.

Without professing to be a complete treatise, or laying claim to absolute originality, this is nevertheless an excellent and useful work, from a man practically acquainted with the subjects he writes about. It comprises nearly all those injuries and diseases of the female generative apparatus which are of such a nature as admit of relief by surgical means. The subjects treated of in its pages are divided into two sections:—I. Diseases or accidents which result directly or indirectly from parturition. II. Diseases or accidents of the female organs occurring independently of pregnancy. Under the first section are classed operations for—1. Rupture of the perineum. 2. Prolapsus vaginæ. 3. Prolapsus and procidentia uteri. 4. Vesico-vaginal fistula. 5. Recto-vaginal fistula. 6. Lacerated vagina. Under the second section are classed operations for—1. Polypus uteri. 2. Stone in the bladder. 3. Vascular tumour of the meatus urinarius. 4. Imperforate hymen. 5. Encysted tumours of the labia. 6. Diseases of the rectum resulting from certain conditions of the uterus. 7. Ovarian tumours.

Distinct consideration is given to each of these lesions. We shall bring some of them under review, in order to notice the improvements or alterations suggested by the author in their treatment.

Laceration or Rupture of the Perineum.—Mr. Brown enters at great length into the consideration of this accident, sixty-six pages being occupied in the examination of its causes, prevention, and surgical history; finally he recommends an operative procedure, which formed the subject of a short essay published by him in 1852, and noticed in our thirteenth volume[a]. The leading features of Mr. Brown's plan of treatment are these:—1st. As to the time of operating: he recommends that this should be done immediately after the completion of labour, when paring the edges of the rupture will not be necessary. 2nd. In every case he divides the sphincter ani muscle before inserting the sutures. 3rd. A decided preference is given to the quill suture. 4th. The action of the bowels is restrained for some days after the operation by the free administration of opium. It would occupy us too long to comment upon each of these points; but we cannot let the first of them pass without entering our strong protest against it; adding, that in our opinion, all the advantages said to be derivable from operating at this particular time equally obtain, and without any of the drawbacks, at a later period from delivery, after granulation has been thoroughly established, and before the surfaces have begun to cicatrize. In our notice of Mr. Brown's pamphlet, just alluded to, we stated that "the great objection to all these operations on the perineum is the danger of laceration from future labours." This objection he refers to in the volume before us, and dismisses it in the following summary manner: "This is another of those vain hypotheses which vanish when tested by experience. The closed fissure certainly presents a cicatrix, but the natural yielding tissues persist on each side and admit of the needed extension." It is but just to add, that in four of his cases of restored perineum, subsequent delivery took place; that in two of them the parts escaped uninjured, and that in the other two rupture of the perineum took place, slight in one, severe in the other.

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[a] Page 428.

Where rigidity of the perineum opposes the advance of the head, and threatens to result in laceration, Mr. Brown gives a preference to the inhalation of chloroform, to any other known means for effecting its relaxation. He says that in the very worst cases, he has found the parts to become dilatable under this treatment. We ourselves have had recourse to it for the same purpose, and have reason to recommend its employment, but not in the confident manner of Mr. Brown. Eighteen cases are narrated in this chapter to illustrate the author's views.

Vesico-Vaginal Fistula.—The operation recommended for the removal of this lesion does not present any feature that is absolutely novel. The kind of suture employed he considers a matter of importance; and he prefers the "clamp suture" of Dr. Marion Sims of Boston, a description of which will be found in the sixteenth volume of "Ranking's Half-yearly Abstract of the Medical Sciences." After the operation the patient is placed on a water-cushion on her side, the hips being elevated: a catheter is retained in the bladder, and opium administered daily until the sutures are removed. The various steps of the operation are defined with great minuteness, and drawings of the instruments, &c., are given to facilitate our understanding his description. The histories of four cases are introduced, in which the operation was performed for the cure of this most distressing ailment, and we entirely concur in the author's comment upon them, "that although they do not exhibit a great amount of success, they may fairly be looked upon as valuable illustrations of our present knowledge and practice." In one case only was there a perfect cure: the fistulous opening was "a mere point, and very high up," and was caused by the pressure of a stone in the bladder during labour. After the extraction of the stone—per urethram—the fistula was closed under the use of the actual cautery. In two instances a *partial cure* was effected, and in the fourth the patient underwent two operations, the second lasting two hours and a quarter. The result of this last operation seemed to be satisfactory so far as the fistula was concerned, but the poor woman died rather suddenly three weeks from the date of its performance, with symptoms of effusion into the pericardium and left pleura. No post-mortem examination of the body could be obtained. The experience of the late Mr. Colles was quite in accordance with the above results. He repeatedly tried the interrupted suture, but though by this means he lessened the fistulous orifice, yet he never succeeded in closing it entirely.

Polypus Uteri.—The symptoms, diagnosis, and ordinary modes of treating this disease are very briefly detailed. The plan of cure which Mr. Brown proposes as a substitute for all the others is "to excise that portion of the polypus external to the ligature immediately after its application." Three examples, not of a very satisfactory nature, are given of this mode of proceeding. Dr. Churchill long ago suggested excision of the polypus *twelve* or *twenty-four* hours after deligation; and this, we think, is a safer and better plan than Mr. Brown's.

Imperforate Hymen.—The removal of this malformation would appear a very simple operation, and, *à priori*, one wholly unattended with danger. Simple it certainly is, but yet not without risk, for fatal peritonitis has not unfrequently supervened. This untoward occurrence Dr. Blundel ascribes to the epidemic influence of puerperal fever prevalent at the time of operation; but Mr. Brown thinks this result has succeeded when there was no such influence to account for it. The explanation he offers we shall presently give in his own words. He objects to the stellate or crucial incision of the membrane, and recommends in preference that it "be removed entirely by a circular incision at the point of its junction with the labia." His reasons for thus extirpating the hymen are contained in the following passage:—

> "Every author who has written on the subject recommends a crucial or stellate incision. This leaves the divided portions of the hymen to retract and remain at each side of the vaginal orifice; and when the operation is performed in the earlier stage, before puberty, or a few years afterwards, these relics of the thickened hymen may create no irritation of consequence; not so, however, when the patient has passed her twenty-fifth or thirtieth year; the divided

> portions do not then shrivel or pucker up, so as to create no inconvenience, on the contrary, vaginitis is very apt to be set up by the friction of the surfaces upon each other, produced by every movement of the body. It is easy to understand how inflammation thus set up in the mucous membrane of the vagina may extend into the uterus, Fallopian tubes, and ultimately to the peritoneum. I would, therefore, throw out the question whether the frequent occurrence of peritonitis after this operation, simple as it appears to be, may not thus be explained."

This piece of etiological reasoning, however ingenious it may be, does not reflect much credit, we think, upon its author; and is not likely to gain many supporters.

Diseases of the Rectum resulting from certain conditions of the Uterus.—In this chapter will be found a good deal of highly suggestive matter, and many valuable practical hints. The influence of displacements and diseased states of the uterus upon the functions and condition of the lower bowel are, we feel satisfied, not sufficiently appreciated or understood. The cases which are introduced to illustrate subjects treated under the above head are highly instructive, and will amply repay a careful perusal.

The thirteenth and last chapter is upon "*Ovarian Dropsy, or Encysted Dropsy of the Ovary.*" This chapter extends to a great length, forming more than one-third of the entire volume. We regard it as a valuable and concise exposition of the diagnosis and treatment, medical and surgical, of ovarian dropsy. We shall make some extracts from his remarks upon two different modes of combating this disease, viz., "tapping, with pressure," and "ovariotomy." To Mr. Brown is mainly due the credit of having introduced the former plan, which has the merit of being nearly bloodless, and comparatively free from danger; whilst in many instances it has proved entirely successful:—

> "*Tapping, with pressure,* should always be combined, both as a matter of precaution when the origin of the cyst is obscure, and as affording an increased probability of cure in any case. Like every other simple operation, the application of pressure may fail from inattention and carelessness. First of all, compresses of linen or lint should be so arranged as to present a convex surface, adapted as nicely as possible to the concavity of the pelvis. Over these compresses straps of adhesive plaster should be applied so as to embrace the spine, meeting and crossing in front, and be extended from the vertebral articulation of the eighth rib to the sacrum. Over this strapping either a broad roller, or, still better, a band with strings and loops, which tie in front, may be applied; or a well-made bandage, which by lacing in front may be gradually tightened.

These bandages must be prevented from slipping upwards by a strap around each thigh. Both the compresses and the bandages will require watching and adjusting from time to time, lest by unequal pressure the bowels or the bladder be subjected to inconvenience. Also the crest of the ilium should be guarded with thick buffalo skin or amadou plaster."

"The effect of pressure before tapping is fourfold in its operation. It sometimes retards the filling of the cyst; it may prevent the increase of the tumour; it sometimes brings about absorption of the whole contents; or, lastly, it may produce a rupture of the cyst into the vagina, rectum, or peritoneum. After tapping, pressure tends to prevent the refilling of the cyst, probably by compressing mechanically the bloodvessels which supply the fluid. The use of pressure is countenanced by its known good results in dispersing various tumours, or in arresting their growth. When tapping with pressure is resorted to as a means of cure, or even with a view of retarding the process of ovarian dropsy, medicines to stimulate the functions of the various abdominal organs, to correct faulty secretions, and generally to improve the health and strength, should also be administered. The use of tapping, with pressure and auxiliary medical treatment, I consider most applicable to unilocular cysts without adhesions, with clear and not albuminous contents, and where time and the condition of the patient admit of its persevering application. There are also cases of multilocular disease, and others where adhesions exist, where pressure may do material good, and retard growth."

From the foregoing extracts and comments the reader may form some opinion of the style and matter of the work. Its design is good, and we think it has been well carried out. That some treatise of this kind was wanting, there is little doubt. The standard works expressly on the diseases peculiar to females did not fully enter into their surgical treatment; whilst the purely surgical authors confined their observations exclusively to the operative procedures occasionally required on the female parts of generation. Mr. Brown's work, however, is still not without its faults, but they are of comparatively small moment. He seems to us to have rather a fondness for cutting instruments, and to underrate the dangers and importance of the operations he describes. Perhaps, too, he leans a little to the side of innovation. Such at least is our opinion, but, notwithstanding, we have no hesitation in recommending this book to the careful attention of all surgeons who make female complaints a part of their study and practice.

De l'Enseignement Médical en Toscane et en France et des Médecins Condotti. Par le DOCTEUR PROSPER DE PIETRA SANTA, Médecin adjoint, Secrétaire du service de santé de sa Majesté l'Empereur, &c., &c. Paris: Victor Masson. 1853. Deuxième Édition. 8vo, pp. 62.

IN the commencement of the *brochure* which bears the foregoing title, we are informed that the writer's object in its publication is to demonstrate two propositions: the first, that medical instruction, as it exists in France, stands in need of judicious reform; the second, that the system which at present prevails in Tuscany is more complete and better arranged.

In giving, in illustration of the second proposition, just quoted, details on the mode of clinical teaching pursued in the School of Florence, the author confines himself to a description of the medical clinique of Professor Bufalini. On this subject we would refer to our opinion given in reviewing Dr. Landi's work on the hospitals of London and Paris[a].

The "médecins *condotti*" appear to be analogous to our dispensary or parish medical officers. The author observes that "on launching into the world, two paths lie open to the young physician, teaching and practice."

"Practice in the towns is the same in Tuscany as in France and England; the case is different with that in the rural districts. The Italian peninsula has long possessed physicians *condotti*, that is, attached to a given locality, dependent on the authority of the municipality, which fixes their salary, determines their powers, enumerates their obligations, and imposes the conditions of their admission. The documents which candidates are called on to furnish vary according to the importance of the *condotta.* This wise institution, which is the first element in the prospects of the young practitioner, insures medical assistance to the poorest of the people. However, as the sovereign choice of the municipality is often biassed by considerations foreign to science, it would be useful to restrain it by limiting it to a list of three candidates, presented by the medical college, and selected by concours. After having inhabited villages, little favoured by nature, the physician seeks to improve his position by demanding a more lucrative *condotta*, and when he has acquired a competency and celebrity, discarding the authority of the municipality, he seeks in cities patients who may more suitably reward his labours."

In a note we are informed that Rome and Constantinople, under the Roman Emperors, had popular archiatres, remunerated by the municipalities, whose duty it was to attend the poor and indigent. At the time of the invasion of the Barbarians, this institution was, like so many others, consigned to the darkness of ignorance, and the exercise of the medical art remained the appanage of the monks and priests; but, when the Councils of St. John of Lateran (1139, 1210, 1215), of Tours (1172),and of Paris (1212), declared the incompatibility of the practice of the art of healing with the priesthood, recourse was again had to the popular archiatres, and the *condotti* were instituted.

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[a] Vol. xvii. of our present Series, p. 157.

"During the thirteenth century, this organization was completed in the Roman States, and in Tuscany; it was not introduced into Lombardy until a later period; Piedmont and the kingdom of the two Sicilies have only recently adopted it."

"The condotti are very well remunerated in Romagna, suitably in Lombardy, tolerably well in Tuscany, badly in Piedmont, and very badly at Naples."

Dr. Pietra Santa devotes twenty-four out of the sixty-two pages which compose the second edition of his book—that now before us—to the reproduction of various critiques on the first edition, a proceeding, in our opinion, no matter how highly we may ourselves think of the merits of the work, far beneath the dignity of an author.

The Diseases of the Fœtus in Utero (not including Malformations), with an Outline of Fœtal Development. By Henry Madge, M. D., M. R. C. S., &c. London: Renshaw, 1854. F. cap., 8vo., pp. 200.

The inquiring spirit of the present age is strongly evinced by the book, the title of which heads this review. Not satisfied with investigating the innumerable diseases which destroy life at every age, from infancy to senility, and minutely exploring the morbid alterations which take place in every organ and tissue of the body, pathologists would penetrate still deeper into Nature's operations, and bring to light the secret causes which, paradoxical though it may appear, occasion death before the being can well be said to have entered upon life. What, we repeat, can more forcibly illustrate that ardent, unquenchable thirst after knowledge, so characteristic of the days in which we live?

That the animal machine should be subject to disease, and liable to fatal accidents and derangements *before* it has assumed an independent existence, and become the tenement of "a living soul," is a fact that must awaken reflection in the mind of the moral philosopher, and cannot but prove deeply interesting to the pathologist.

By the great mass of practitioners the pathology of the fœtus is a subject wholly unknown, or at best but little understood. To borrow the language of Dr. Madge, "even speculative genius, so prolific in every other department, has been comparatively silent on the diseases and dangers which threatened its own embryotic existence." No attention is bestowed upon it, as no immediate practical benefit is apparently to be derived from its pursuit; and hence the defective state of our knowledge of fœtal pathology, and the limited number of recorded facts and observations bearing upon it. And yet, strange to say, the opportunities for studying the effects of morbid action on the animal body before birth are of frequent, everyday occurrence. Too true is it, that the empire of disease extends to the unborn multitudes of our race! Among this helpless class its victims can be reckoned by hundreds and thousands. Nearly every disease of adult life may reach the fœtus in utero. Hydrocephalus, hydrothorax, ascites, and anasarca; phthisis and other pulmonary lesions; syphilitic and scrofulous eruptions, deposits, and organizations; peritonitis; small-pox; intermittent fever; ulcers; tegumentary phlegmasia; entozoa; convulsions; jaundice; cirrhosis of the liver, &c., have all been met with. In short, we may affirm, that the fœtus is in danger of nearly the whole list of human diseases—constitutional, idiopathic, epidemic, and accidental.

As might be expected, the "cui bono" objection is often assigned as a sufficient excuse for not exploring this portion of the pathological field. In a practical point, it is said, the knowledge thence derived would be useless, and theoretically dry and unprofitable. To such objectors it is hardly worth while condescending an answer. The advocates of these narrow and antiquated opinions lose sight of the great principles of all scientific research, and forget that there was a stage in the beginning of almost every department of natural science, when the very same objections might have been, and no doubt were, made with equal, if not greater, plausibility.

Within the last few years a good deal has been done towards an elucidation of this subject. Many physicians of high standing and extensive opportunities have been and are deeply engaged in its study. The results of their researches have from time to time been laid before the profession; but these contributions have unavoidably been very much scattered and unconnected, appearing at different times, and in various journals, English, French, and German. The work of Dr. Madge is the first attempt to collect this dispersed information into a connected form, accessible to all classes of practitioners. He himself acknowledges his principal aim to have been "to assist in bringing before the notice of the profession a subject hitherto neglected," by which declaration of his moderate ambition he hopes to "disarm criticism," and of course conciliate his reviewers.

But in truth it was scarcely necessary for him to have said so much: the nature of the work, and the object of its author, being sufficiently apparent throughout, and justly claiming our unqualified approbation. As its title indicates, the work consists of two parts: the first being upon "the Development of the Fœtus in Utero," and the second on "the Diseases of the Fœtus in Utero." The former of these occupies more than one-third of the volume, and except it be to swell its size, might, we think, have been just as well omitted. It does not pretend to be more than an outline, and though very clear and intelligible in its way, still has nothing to recommend it over the descriptions to be found in many of the standard treatises on anatomy, physiology, and midwifery. His account of the placenta, membranes, &c., is generally very correct, and contains extensive reference to the writings of modern ovologists, so as to lead the reader to believe that the author is quite *au niveau* with all matters relating to this subject. It appears, therefore, the more strange to find him quietly assuring us that the fœtus, "from the commencement, obeying the laws of gravitation, is generally found with an inferior presentation of the head;" as though this were one of those few incontrovertible points upon the truth of which no doubts had ever been raised. The fact is, however, that this short and simple statement contains two grave errors:—1st. In assuming the head to be the most dependent part of the fœtus throughout the entire of pregnancy; and 2nd. In ascribing this position of the fœtus to the influence of gravitation merely. This point has been investigated with great care by M. Paul Dubois, and his general conclusions are sustained by the observations of many accurate observers. He has demonstrated that gravitation has no influence whatsoever in determining the presentation; whilst his facts, which are very numerous, show presentation of the head to be proportionably much less frequent in the earlier than in the latter months of pregnancy.

We now pass to the second, and by far more valuable portion of Dr. Madge's little volume. That disease of the fœtus plays a very important part in the destruction of fœtal life may fairly be inferred from the following statistics; though in what exact proportion, we are unable, from want of data, to determine accurately. In a recent Medical Journal cited by our author, it is stated that—

> "Throughout the whole of France in 1850, the still-born to the ordinary *deaths* were as 1 to 31·28. In Paris alone, 1 to 10·69. Throughout the whole of France the still-born to the living *births* were as 1 in 31·7. In Paris 1 to 12·6. In Glasgow the average is 1 still-born to 10 deaths."

During Dr. Collins' Mastership of the Lying-in Hospital the proportion of children born in a putrid state (and which, therefore, we may fairly assume to have perished anteriorly to labour) is 1 to 31. In the Report of the same institution published by Drs. M'Clintock and Hardy, we find that 1 putrid birth took place in every 47. These numbers, it must be remembered, are very far from showing the actual extent to which fœtal diseases prevail. Many children perish in utero from local or general disease of the mother; and, on the other hand, many morbid affections accompany the new being in its passage from intra-uterine to extra-uterine life; and consequently of all such cases no account is taken in the above numbers.

The diseases of the fœtus are divided by Dr. Madge into three classes:—"1st. Those received from the parents. 2nd. Those peculiar to itself or its appendages. 3rd. Those arising from accidental or other causes." Of the first group, or hereditary diseases, he makes two classes, namely, those transmitted by the mother, and those by the father; whilst the maternal diseases which may affect the child in utero are,—(*a*) acute; (*b*) chronic; and (*c*) other states, such as abnormal growths in the pelvis, &c. Now all these divisions and subdivisions savour very strongly of Continental refinement, and prove rather a hindrance than a help to the clear understanding of this intricate subject. Besides, in the present imperfect state of our knowledge, it is unsafe to put forward a classification which further experience may prove to be unsound; and it is almost impossible to make one that will not involve some theory or hypothesis, which must tend to warp our judgment in the interpretation of facts.

"Syphilis in the fœtus" receives a very full consideration from Dr. Madge: on very many of the interesting questions connected with this subject he has collected the opinions of several eminent authorities, of the Paris school chiefly. Thirty pages are profitably occupied in the discussion of these questions.

The other diseases of fœtal life are examined very briefly: some, indeed, are dismissed with little better than a passing notice, as for instance, pneumonia, scleroma, and peritonitis.

The morbid states of the fœtal appendages receive a fair share of consideration; to the diseases of the placenta especially several pages are devoted. Although the author does not enter minutely, or even very fully, into these matters, still his remarks contain a very excellent summary, quite sufficient to give the reader a good general idea of the extent and the deficiency of our knowledge on this subject. Further on Dr. Madge introduces some observations on abortion, twins, extra-uterine fœtation, signs of fœtal death, and auscultation of the gravid uterus,—subjects which do not to us seem to have much connexion with the "diseases of the fœtus in utero," and which, we think, might without any impropriety have been omitted. The "concluding remarks" supply in brief but clear language a sort of general retrospect of the whole subject treated in this volume: from them we make the following quotation:—

> "On taking a general survey of what has been advanced on diseases of the fœtus in utero and fœtal development, it will at once be seen that much is involved in doubt and obscurity. There is such a contrariety of opinion pervading the inquiry, that unless I endeavour to reconcile opposite views, or prove that some are correct and others in error, the contents of the foregoing pages, I fear, will to many seem to possess but little value. It will, however, be something gained to obtain for the subject more attention. There is but little doubt, if the whole medical profession could be made to feel in it a sufficient degree of interest, their united observations would in a short time do a great deal towards advancing the study of the diseases of the fœtus in utero, and a great deal more than can possibly be expected from many years devoted to it by a few physicians and pathologists. The latter, however, cannot be dispensed with; general practitioners have neither time nor inclination to go much beyond the collecting of facts; their generalization, the theories they originate, establish, or overthrow, must be left to the hard-working physiologist and philosophical student."

We entirely agree with the author in these opinions, and sincerely hope that the main object he has had in view in the preparing of this work may be fully realized. That we think it well calculated to promote this object may readily be inferred from what has preceded; and we therefore unreservedly recommend it to every member of our profession who desires to cultivate and advance medical science. At the same time we feel bound in candour to express our opinion,—and it is merely an opinion,—that in some respects, which have been already hinted at, the real value of the book might be greatly enhanced, and this too without making any material increase of its bulk. Even to give references to the writings of those authors who are cited as authorities would certainly be a considerable addition to its utility, and very little to its size.

Anatomical and Physiological Observations. By JOHN STRUTHERS, M.D., Fellow of the Royal College of Surgeons, Edinburgh. Edinburgh: Sutherland and Knox. 1854. 8vo, pp. 238.

THE author, conceiving it requisite to send forth this literary effort with an apologetic introduction, calculated to insure indulgence, prefaces the volume by stating, "that it consists chiefly of papers which have already appeared at different times in the Medical Journals, to which notes, and several papers are now added;" and further, expressing the nature of those multitudinous occupations which engrossed his attention during the publication, declares, "that he lectured twice daily, and superintended the dissecting-room studies of a class of *four hundred* students." Now although we cannot plead guilty to the possession of a superabundant sensitiveness or excessive refinement, still a confession involving interests of so grave and serious a nature, not only surprised, but almost startled us, into an expression of disbelief in reference to the implied fact, that a class of four hundred students was and is to be dependent on the assistance of a single demonstrator; yet such is the admission, which we conceive to be an anomaly so inconsistent with the spirit of sound anatomical instruction in the dissecting-room, as scarcely to lie within the range of credibility. That such a system should be permitted to exist in any school cannot be defended; but that it should and does occur in an institution connected with the famed Medical School of Edinburgh is something more than indefensible, for it deserves the gravest reprehension of every individual conversant with teaching, in order that an immediate remedy may be adopted. In the Dublin Schools a single demonstrator is conceived to be fully employed in the attempt to instruct twenty pupils, and such is the exact ratio which determines their appointment; and, so far from the duties of the office being trivial, when conscientiously performed, we do not hesitate to affirm, after some experience, that a more onerous and laborious occupation cannot exist, than that of imparting elementary instruction even to a limited number of pupils in the dissecting-room. Thus taking exception to the statement of Mr. Struthers, but anxious at the same time to accord to every individual the meed of justice to which he is fairly entitled, we looked carefully through his book, hoping to discover the evidences of a more facile mode of imparting anatomical information, than that which has rendered the Irish School proverbial for its successful labours in this department of medical science; and how we have fared in the progress of a tedious and unprofitable search our future remarks will determine.

But, in the first place, we cannot refrain from the discussion of a general question, arising out of the literary formation of this work, and the peculiar nature of the circumstances involved by its publication: the proposition to which we allude being, —How far, and under what circumstances, is an author justified in republishing a series of papers which have already appeared in the periodical press? Where a writer in general or particular literature has contributed largely to its progress, the essays conducing to that effect being published at intervals, and with difficulty accessible to the general reader; where points of great interest are discussed in papers at different periods, which, when taken collectively, will exhaust the literature of the subject they were purposed to elucidate; where a perfect style and elaborate diction, even independent of all other features of interest, render classically valuable the essays of any author, although they may be altogether deficient in originality; and lastly, where a writer has acquired a high and deserved reputation by his acknowledged contributions;—then, and only then, subject to the circumstances we have enumerated, ought those fugitive and anonymous papers receive the stamp of that authority, which may give weight to opinions and arguments that would be otherwise dismissed with a brief and cursory perusal of their contents, and be consigned to the waste of ephemeral publications, which, unfortunately, form the patent characteristic of our present literature. In illustration of our opinion on this subject we adduce the "Literary and Historical Essays" of T. B. Macaulay, which conferred by their publication in a collective form a valuable boon on the general reader; and the posthumous publication of the Anatomical and Physiological Essays of the late lamented John Reid, which contain a series of experimental researches in relation to physiological science, not only of the greatest value to the profession, but likewise calculated to reflect the highest honour on the school of which he was one of the most brilliant ornaments. But when a writer of limited reputation will select his papers from the Journal which published them, to embody a volume as a reprint, it argues but a sad appreciation, in our opinion, of the professional status and general respectability of the periodical, and implies an absence of that extensive circulation equivalent to satisfy a thirst for literary notoriety. Yet are these legitimate reasons to excuse a practice which, if universally pursued, would inundate the profession with unnecessary monographs of this description? We answer, emphatically, No; and we trust that Mr. Struthers will adduce some more valid explanation for the course which he has considered it right to pursue, as we assure him that it is from the principle we dissent, and by no means in consequence of the matter contained in the volume, which is always above mediocrity, and sometimes remarkably good in its kind.

The work consists of 209 pages, divided into sixteen articles on various subjects in anatomy and physiology,—many possessing the merit of accurate and patient research, whilst a few exceptional lapses occur, exhibiting an unconsciousness most remarkable, as to the claims of contemporary anatomists, a circumstance which we indulgently attribute to the arduous nature of the avocations claiming the author's attention.

The papers 1 and 15 display fully Mr. Struthers' capacity for labour in furnishing a series of observations on the supra-condyloid process in the human subject. Comparative anatomy, almost in every instance, displays the adaptation of organs and particular parts for the purpose of conducing to certain ordained purposes in the economy, which are perfectly appreciable to the physiologist, being in accordance with the habits and necessities of the being. But how frequently does it occur that, although habits may change external configuration and a new and totally dissimilar formation be impressed on the general features of the animal,—parts performing some important office in relation to life, or the continuance of the species in a certain class continue sometimes to manifest themselves in a rudimentary condition, or more rarely in the perfection of full development, without contributing to any assignable use in their functional relations discoverable by the anatomist. Hence we are compelled to recognise the universality of type in the created world of life, and coerced to admit the justice of the principles on which the theory of transcendentalism is based, notwithstanding the vague ideas with which the opinions (far-fetched and improbable) of St. Hilaire have surrounded a captivating and interesting department of science.

It is a well-known fact in comparative anatomy that in some carnivora, rodentia, quadrumana, and edentata, the brachial artery, accompanied by the median nerve, passes through a canal or foramen in the internal and anterior part of the humerus,—an arrangement particularly conspicuous in the lion, tiger, and cat. Much difference of opinion prevails as to the object attained by this defensive position of the main artery and nerve of the brachial extremity; some believing it designed as a protection from muscular pressure, whilst others assume its protective agency as essential in those animals with whom the anterior extremities perform the office of powerful organs of prehension and compression. With reference to the first there is not any muscle in the vicinity calculated to induce the effects of severe compression; and as regards the second opinion, a similar defensive conformation is present in animals of peaceful tendencies, as the rodentia, and by no means confined to the predatory carnivora. Perhaps this particular arrangement may serve to retain the parts in situ during forced flexion, performing an office similar to the strong fascia stretched between the brachialis anticus and the inner head of the triceps in the human subject.

In man a supra-condyloid process has been observed, a discovery to which the attention of the profession was directed by the statement of Magendie, that in the yellow races of Africa there existed a supra-condyloid process and foramen similar at least in function to that of the carnivora. Knox, Tiedemann, and Quain, have also noticed its presence in the human subject; but to Mr. Struthers is undoubtedly due the credit of testing the assertion, and the whole subject seems to have fructified under his hands, yielding to a close and rigid examination. He gives a record of sixteen cases, and we willingly quote from this valuable paper, condensing its matter in our course:—

"*As regards Situation, Length, and Form.*—The situation is remarkably constant. In the adult bones it is two inches above the internal condyle, measuring from the upper edge of that prominence to the middle of the base of the process. In one it was $\frac{1}{6}$ inch nearer, and in one $\frac{1}{4}$ inch further from the condyle. In Case No. II. only did it lie considerably nearer the condyle, being an inch and a quarter from it, and here the process was long and of unusual breadth.

"The length varies from one-tenth of an inch to three-fourths of an inch. It is seen in all stages,—as a short rough line, a pointed tubercle rising from a base elongated upwards and downwards, and a hook or spur-like process of greater or less length. I have never seen it longer than three-fourths of an inch. In the specimens figured it is of this length. It begins by a vertical ridge half an inch to an inch and a half in length, gradually rising to the commencement of the process proper. The process projects away from the bone, forwards, downwards, and inwards, is flattened from before backwards, tapers to a blunt point, and if prolonged for an inch would form an arch of bone joining the ridge half an inch above the condyle. This is represented by the ligament and process, and the ligament and process together enclose between them and the bone an elliptical space one inch in length, and one-third of an inch in breadth, through which the median nerve and the brachial artery with its venæ comites passed.

" The origin of the process with regard to the ridges of the humerus is also constant. It arises from the internal surface of the bone midway between the internal and anterior borders, or a little nearer to the latter, and behind it there is a well-marked groove to which I shall again allude as existing in many arm-bones on which there is no process.

" *As regards Symmetry.*—In seven of the cases nothing was known of the other arm. Of those seven, six were on the left arm, and one on the right. In four cases it was present on both sides, in three of these it was of equal length on the two sides, in one pair long, in one pair short, and in the third of medium length; and in the fourth they were unequal, the left very long, and the right very short. In four cases in which both bones were examined, but in which the process was present on one side only, this side was the right in all, but in the case where it was present on both sides, but unequal, the right was the largest.

" *As regards Sex and Age.*—The sex was known in ten of the cases,—three of these were in males, and seven in females. In two of the three males it was present on both sides, and was so only in one of the females. The specimens are from subjects of all ages. Three of these were very young children, and in all of them the process was well formed.

" *As regards Arteries.*—The state of the arteries was known in twelve cases, and four of these presenting the process on both sides; we have sixteen in which to notice the relation of the arteries to the process. When the artery is affected by the existence of the process it leaves the biceps near the insertion of the coraco-brachialis, and passes down with the median nerve along the internal intermuscular septum to reach the concavity of the process underneath which it passes. Out of the sixteen instances, in nine the undivided brachial deviated and passed round the process; in four there was a high division, one of the arteries keeping normally along the edge of the biceps, the other deviating to pass round the process. The vessel which deviated in these four was the principal trunk, the high radial not deviating. In the remaining instance—that by Tiedemann—the deviating vessel was the deep interosseal. In the remaining there was no deviation of the artery, although the process was present. In two of these the other arm was in all respects normal; in the third there was a long process, and the artery deviated."

The author has observed, in relation to the median nerve, that where a process existed, although the artery might not deviate, the nerve invariably did so, evidencing that the process is more materially related to the nerve than the artery; and comparative anatomy also furnishes evidence which tends further to corroborate this view, as from the author's dissection of the ichneumon (mangusta), he observed that the nerve winds round the process, wholly independent of the artery. So far we have endeavoured to give a condensed view of the author's labours in this interesting department; but in doing so we have carefully avoided the introduction of Mr. Struthers' views of what he conceives to be original in human anatomy, from a desire not to detract from, but rather to protect, any reputation he has acquired in that department.

The papers which follow on the oblique muscles of the eye, nerves of the orbit, duplex stomach, pelvis of the Esquimaux, valves of the heart, rudimentary ribs, fifth pair of nerves, diverticula from the intestines, being a series of reprints, require no comment from us, except that the contents of each were so fairly before the profession, it was scarcely necessary to reproduce papers not even professing to be original.

Here we pause, to deliberate without malice, to consider closely without injustice, and to express the results of our reflections without prejudice, in relation to a paper entitled, "On Various Points in Anatomy, considered in a Review." The propriety of attaching the reviewer's name to the critiques on new works issuing from the press still continues subject to a remarkable diversity of opinion, whilst the advocates of the different sides of the question are as strenuous in the support of their discordant views as the supporters and opponents of open and secret voting. To us, unprejudiced by presuppositions, it seemed to be a question which experience alone could solve to the satisfaction of the contending parties, and we therefore received with pleasure a short time since the announcement of an eminent contemporary, that henceforth its reviews should be authorized by the signature of the writers. But although this practice has now been in operation for a few years, we confidently appeal to the advocates of open and undisguised writing to adduce a single particle of real utility conferred on our literature by the adoption of a system admittedly open to grave and serious objections. The task of a reviewer, though honourable in its nature, entails a large amount of responsibility. Standing as the umpire between the author and the public, on him devolves the painful office of detecting lapses in style, incorrectness as to description, and frequently the stern exposure of decided errors,—whether resulting from negligence or ignorance being immaterial to consider,—and yet that author whose labours he has condemned, whose hopes, yielding to the dictates of duty, he may have rudely crushed, might be his familiar friend; and sympathy, which leans towards toleration, falls before the claims of duty, compelling an unwilling condemnation. And is not this sacrifice sufficient? We think so; but those who differ from us in opinion say, that with stern Spartan courage you should exclaim, "It was I, even your friend, who exposed you." The laws which regulate society, and render social intercourse tolerable, will eternally oppose an impassable barrier to a proceeding ungracious in its nature, and calculated only to inflict unnecessary pain and annoyance. Or, again, the happier duty of conferring praise may fall to the lot of the reviewer, and yet the author may be at variance with him, or "sorely vexed." The complexion which the granting of well-earned praise would assume under those peculiar relations may be conceived as neither pleasing to the reviewer nor satisfactory to the author. Far be it from us to assert that such conditions ought to exist; but it suits our illustration to assert that they do and ever will continue to operate until all dispositions assume the same tone, and human interests merge into a common unity,—a moral millennium, which we, although sanguine, cannot hope to see accomplished.

But Mr. Struthers has adopted both sides of the question, and even taken a step in advance, by adopting a course of proceeding only allowable under the most peculiar circumstances. In the April (1854) Number of the Edinburgh Medical and Surgical Journal he wrote a review of Mr. Wilson's Anatomy, or Dissector's Manual for Students, anonymously, as in the case of other reviews in the same periodical. Its character was critical, its general tenor condemnatory of the work, and it was interspersed with hints as to the mode of preparing a useful book of the kind. Not content with this, he now abstracts the article from the Journal, in the hope of conferring on it additional publicity,—a course of proceeding which we are confident will meet with the most unqualified disapprobation of every individual who possesses a trace of generous liberality. We conceive that it was to the Journal the book was sent for review or opinion, and not that Mr. Struthers' repertorium of elegant extracts might be increased by a wanton display of critical acrimony. We denounce in the strongest manner this unwarrantable interference with the inherent property of periodical literature, and deeply regret that the self-respect of the Editor should have allowed him to sacrifice an obvious principle by sanctioning a course without a single redeeming feature to give it countenance. Without entering into a defence of Mr. Wilson's Manual, a task foreign to our purpose, we would wish the author of the review to prepare a manual free from those defects which he discovers in Mr. Wilson's book; and to accomplish this he must commence by creating a body which may be arbitrarily divided into regions, as, with the structural totality which prevails in our present *imperfect!* fabric it amounts to an absolute impossibility to map out regions not liable to some objections, although they may be both puerile and practically frivolous. But the question resolves itself into this issue: Does the division into regions assist the student for whom an elementary work is intended? We answer in the affirmative, recognising, on the plea of utility, the claims of an author to consideration, who endeavours to simplify an arduous branch of our profession, although he may not have been perfectly successful in his attempt. We would advise the author, in his future attempts at reviewing, to take an enlarged view of the nature and intention of the work before him, and to be guided by a spirit of tolerance and liberality in estimating the labours of others, a course calculated to insure a similar indulgence to his own attempts, which we at least conceive that they require.

In the last article in the book Mr. Struthers occupies eight pages with an account of Scarpa's fascia, which, he states, is not properly described in the class-books on anatomy. We select the anatomical work[a] which lies at present on our table, to test this assertion of our author. He states that it arises from the groin, below Poupart's ligament, and is a thin, semi-transparent membrane, of considerable strength; that it surrounds the cord, and, passing into the scrotum, it forms the perineal fascia; and thus that it guides extravasated urine upwards on the abdomen; that, whilst above Poupart's ligament, it lies beneath or is covered by a femoral hernia. Now for extracts from the anatomical class-book named in the note:—"On raising the superficial fascia, a second layer becomes visible, originally described by Scarpa. It is *dense, semi-transparent, and devoid* of fat, and can be raised as a distinct layer about four inches above Poupart's ligament. Following it downwards, in the middle line, it passes over the pubis, investing the penis in a tubule; as it lies on the pubis it is beneath the false suspensory ligament; more externally, it *invests the cord, which conducts it into the scrotum*, from which it is continued backwards to form the *proper perineal fascia ;* still more externally it adheres to Poupart's ligament most intimately, and is finally attached in the groin to the *crebriform fascia*"[a]. In the anatomy of the perineum, this class-book, having described the continuity of the perineal with Scarpa's fascia, states:—" In consequence of these relations, urine extravasated in the *perineum* cannot become extravasated laterally or posteriorly, but *follows the course of Scarpa's fascia upwards on the scrotum*, *and so by the cord is conducted to the abdomen*"[b]. Again, the class-book, in describing the relations of a femoral hernia, states: " And it lies here between *Scarpa's and the superficial fascia*"[c]. Thus perishes the last attempt at originality in surgical and descriptive anatomy.

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[a] Ledwich's Human Anatomy. Dublin, 1852.

In conclusion, we would wish the author rather to re-observe, than to attempt original investigations: for the first, patience and self-sacrificing labour alone are requisite; but to create, originate, or invent, requires a higher order of ability than is conferred on the majority of our race.

Traitè de la Syphilis des Nouveaux-nès et des Enfants à la Mamelle. Par P. DIDAY, ex-Chirurgien en chef de l'Hôpital des Veneriens de Lyon. Paris: Masson. 1854. 8vo, pp. 439.

To this essay was awarded the gold medal at the Concours held in Bordeaux, and after a careful perusal of it we can honestly say that the honour was merited. In addition to extensive personal experience, the author is fully acquainted with the literature of the subject, and, what is not common among our neighbours across the Channel, with both English and Irish periodical literature. Nor is such a work superfluous. There are many points still very doubtful, and others which have been more or less cleared up by recent observers; and we are sure that the gratitude of the profession will be accorded to the man who shall lay a large and correct statement of these various points before it.

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[a] Page 865. [b] Page 398. [c] Page 440.

The work is divided into five parts, treating respectively of the etiology, symptomatology, prognosis, jurisprudence, and therapeutics, of the disease. We shall offer a few words on each.

After a slight historical sketch, the author proceeds to a division of syphilis in infants into congenital and acquired; and he subsequently adds a further division of the former into syphilis communicated to the ovum at the time of fecundation—hereditary syphilis, and syphilis communicated during subsequent intra-uterine life—congenital syphilis.

In the first chapter, several queries are stated as the problems to be answered. Thus, for example: "Can the father, who alone is syphilitic, give the disease to his infant without infecting the mother?" to which M. Diday answers in the affirmative, and supports his opinion by cases and authorities. Again, "Can a man who has had syphilis, but who is at the time free from all symptoms, beget a syphilitic infant?" This also is answered in the affirmative, though the rule is not invariable. Thirdly, "Can a man suffering from syphilis, and cohabiting with a pregnant woman, communicate it to the fœtus without infecting the woman?" The fact is admitted by Blegny, Hunter, Nisbett, and others; and whilst answering the question in the affirmative, M. Diday states it as his belief that it is not by direct influence, but through the maternal circulation, that this is done.

The influence of a syphilitic mother may be exercised in two ways upon the fœtus, either in emitting a diseased ovum, or in communicating, during pregnancy, nutrition altered by the venereal diathesis. As regards the influence of the mother infected before conception, over the ovum, there is no question; although the matter is not quite so simple as at first appears, unless we can be sure that the father is not syphilitic. As to the influence of the mother, infected after conception, M. Diday is equally decided in the affirmative; but he has endeavoured to solve an interesting question, viz., whether this form of transmission has limits, and at what period of gestation it ceases? M. Ricord believes that it is only during a certain period of gestation that this takes place; and while our author agrees with M. Prieur that the infant rarely, if ever, escapes when the mother is infected during the earlier months of gestation, he has adduced evidence to prove the correctness of the opinion expressed by these gentlemen, that the infant is not affected by syphilis acquired during the last two or three months.

Hitherto it has been assumed as certain, that if both parents are syphilitic, the infant has no chance of escape: but this M. Diday does not consider so inevitable, especially if the parents be slightly affected; certain it is that we occasionally see a healthy child born of diseased parents whose other children have all been syphilitic.

Passing from hereditary and congenital syphilis to the acquired disease, our author considers the various modes by which the infant may be infected, such as infection in the passages of the mother, which has been considered the chief, but which M. Diday as well as M. Ricord consider as possible, but rare, by the nurse, or accidentally. The nurse may acquire the disease from an infant with hereditary syphilis, and communicate it to an infant hitherto healthy through the medium of a sore nipple: but can she do this through the medium of the milk only? Although the negative has been maintained by Hunter, and most of the celebrated syphilographers since his time, M. Diday considers the question far from proved, and very difficult of proof: yet that such a supposition is by no means unreasonable. Among the accidental causes may be a primitive chancre, from which the nipple may be infected: and consequently, the infant, or a strange infant, to whom the nurse gives the breast, may communicate the disease, which she may transmit to another, as happened in a case which came under our own eyes; and how far it may spread it may be difficult to tell. Again, a person having a chancre may communicate the disease to an infant by contact, accidentally or criminally.

The chapter upon the various symptoms or manifestations of the disease is an extremely valuable one, but we cannot now enter fully into the subject. The author treats in detail of primary chancre, buboes, exanthematous eruptions, mucous patches (*plaques muqueuses*), papulæ and squamæ, pustules, bullæ, coryza, onyxis, lesions of the osseous system, and the characteristic general appearance. He enters very fully into the interesting subject of the lesions of the internal organs, which have been of comparatively recent observation: amongst which may be mentioned the nodulated condition of the lungs noticed by MM. Lagneau and Depaul; suppuration of the thymus, by M. Dubois and others; the lesion of the liver, by MM. Gubler and Depaul; and peritonitis, by Dr. Simpson and M. Gubler. A careful perusal of these sections will amply repay the reader.

The author next considers the course of the disease; and upon the period of its first appearance in the infant he has collected 158 cases, showing the following results. It seems that it first appeared—

Before the end of the first month,	in 86 cases.
„ „ second month,	„ 45 „
„ „ third month, .	„ 15 „
At four months old, ...	„ 7 „
At five months old, ...	„ 1 „
At six months old, ...	„ 1 „
At eight months old, ...	„ 1 „
At one year old, ...	„ 1 „
At two years old, ...	„ 1 „

"Thus 131 infants out of 158 exhibited the disease before the end of the second month; and of these 131 infants 110 showed the symptoms before six weeks, and 86 before the end of a month. Of a series of 105 cases, in which the period is still more minutely designated, we find that 45 showed symptoms within thirty days; and of these, 24 were affected before the fifteenth day, and 10 before the eighteenth."

A very interesting question arises as to whether the symptoms differ when the disease is hereditary, or acquired during gestation, and M. Diday has given two series of cases, in the first of which the father only, and in the second the mother, was affected,—from which he draws the following conclusions:—1. That as to the absolute *gravitè*, they are pretty equal, inasmuch as in the paternal series 5 infants out of 10 died, and in the maternal 4 out of 9. 2. That nearly the same equality in the two series was observed as to the time when the disease first appeared in the infant; though, upon the whole, more of the first series showed the disease from birth. 3. That as to the nature of the symptoms, the appearance in each series was as exact as possible. Ulcers, copper-coloured patches, mucous "plaques," pustules, and pemphigus, were found in either. It must be remarked, however, that abortion or premature delivery was more common in the second class; of 8 cases only 3 were born at term; whilst of the 10 cases of the first series only 1 was premature. 4. That the curative power of mercury, when given during gestation, was equally shown in both series.

After entering into the consideration of the cause why congenital syphilis is so dangerous to infants, M. Diday passes to the enumeration of the dangers themselves. The first of these is abortion, which no one questions may be the result of intra-uterine syphilis, chiefly from its causing the death of the child. And when the infant exhibits the symptoms of syphilis well marked, the case will be clear; but in many examples, where the child has been some time dead, it is quite impossible to decide whether it is syphilitic or not. Again, if the mother have no signs of the disease, and the first child be born prematurely, dead, and putrid, are we to conclude that it is due to syphilis? In many cases it is so, and yet it would be somewhat rash to pronounce positively. A second child, born under similar circumstances, ought always to arouse our suspicions: and if either parent have had the disease, it will be advisable in most cases to adopt the plan of exhibiting mercury fully to both parents, as first recommended by the late Dr. Beatty of this city. Should the condition of the parents prohibit the full use of this medicine, we may still hope that the disease may wear itself out.

2. The infant may die after birth of the disease, though this is not a universal termination: and even where it has occurred with one or more children, the remainder may escape with a milder lot.

3. M. Diday examines fully the question of the transmission of the disease from the fœtus to the mother, and maintains the affirmative, which he supports by a number of well-selected cases.

4. He differs, and we doubt not justly, from Hunter and Ricord, in believing that an infant affected with congenital syphilis may transmit it to the nurse, and through her to others of her family—as has been well observed by the late Mr. Colles —although it will have no such effect upon the mother.

5. The infant may communicate the disease to other persons: of this there are too many cases on record to admit of a doubt.

The next section is occupied with medico-legal considerations connected with the subject, for which we strongly recommend our readers to consult the original; and lastly, for his views on the treatment, a few words will suffice, as we do not find that M. Diday has added anything to our previous knowledge on the subject. As far as prevention is concerned—if the parties, one of whom has syphilis, are married, or are determined to be, the only course is to submit both to antisyphilitic remedies, if any symptoms show themselves; and still more necessary is it, if infants have been born with marks of the disease, or putrid. The only remedies for new-born infants, between which there is a choice, according to our author, are mercurials and preparations of iodine; and there can be little doubt that the former are preferable. They may be given by the mouth, or by inunction, baths, fumigations, &c.; or we may have recourse to several of these methods at the same time. Ample and sensible directions on these points are given by

M. Diday; and we need scarcely say that we strongly recommend his useful volume, from the beautiful press of Victor Masson, to the careful attention of the profession.

A Short Exposition of the Circulation and Nervous System, with reference to Disease and Treatment. By G. HAMILTON BELL, F.R.C.S.E. Edinburgh: Maclachlan and Stewart. 1854. 8vo, pp. 67.

THE connexion between the circulating and nervous systems, and the mutual influence they exercise in the modification of disease, form a study of the first importance. The laws of life are not only so different, but at times so opposed to those of matter, that rational expositions of vital actions, when tested by observation and experience, not unfrequently resolve themselves into assumptive hypotheses or deceptive theories. Physical science has so many fascinations, so many self-evident propositions, so many demonstrable facts, that it requires a mind *schooled in the study of life* to avoid those deceptions which apparent analogies between vital and mechanical actions are too apt to originate. Materialism on the one hand, vitalism on the other, demand the careful estimation of the physician. They must be studied in their relations. To be guided alone by those laws regulating organic structures is to ignore the existence of that creative and preservative power which has eventuated in their perfection:—to lightly estimate the influence of those structures is to presuppose an independence on the part of the organism, which daily observation, if not common sense, rejects. In our explanations of many phenomena both physics and mechanics are brought to a stand-still. Vitality is advanced, and one difficulty thus set aside by the adoption of another.

Vitality relieves the inner coat of arteries from the inconvenience of attraction, while the elasticity of the walls assists in propelling and regulating the current of blood until it reaches the capillary vessels, where the *per saltem* action ceases.—The "capillary power," as it is denominated, or the means by which the capillary vessels influence the blood flowing through them, is one of those properties which, in lieu of a better term, is called vital.—The balance of power in the system is preserved by vital influences, which enable the heart to propel, the vessels to assist, and the capillaries to control, the circulating fluid.—In the veins more especially is the circulation under the influence of vitality; for, as regards them, mechanical laws oppose physical explanations.—In the study of *vitality* and its more immediate instrument, the nervous system, rests the true foundation for correct nosology, and for those principles on which the doctrines of therapeutics should be based.—This much we infer from the introductory observations of Mr. Bell respecting the circulation which precede his examination of its general relations to the nervous system.

Regarding that vital controlling power which is involved in each successive process of assimilation as unquestionably nervous, Mr. Bell argues that through the nervous system are remedial appliances to prove available; and, inasmuch as there are distinct classes of nerves regulating different departments of the system, in which each is liable to be influenced by diseases, accidents, or medicinal agents, not acting directly on the others, he ventures to hope that we shall have less of empiricism in the treatment of disease; and that our pharmacopœias will be freed from the *contradictory qualities, so often ascribed to the same medicine.* The philosophy of Mr. Bell's reasoning may be inferred from the profundity of this latter remark, which is strangely at variance with his previous extended view of vitality. Uniformity of effect savours strongly of Routinism, twin sister of quackery, and bids fair for the discovery of the long-sought universal remedy. That the same medicine will, according to the circumstances under which it is administered, produce results widely differing, there is abundant reason to believe; and that two individuals similarly affected may be differently acted on by the same remedy, every day's experience proves. Eclectic medicine finds honour, and mankind safety, in acknowledging this diversity; while amongst the many practical truths its recognition has impressed us with, there is none we are more fully satisfied of, than that which leads us to declare, whatever be its action, the sesquichloride of iron does *not* invariably prove a specific in erysipelatous inflammation, a view of its therapeutical action Mr. Bell concludes his work by advocating.

Of the author's practical deductions, and his observations respecting cholera and fever, we shall only observe that, however suitable they might be to the tropics,—and in so writing we by no means acquiesce in their adoption,—they are at variance with our experience of the first affection as witnessed here, and would find little favour from those habituated to treat epidemical diseases in these countries.

A Few Practical Observations on the Injuries incidental to Warfare: the substance of Three Lectures addressed to the Officers and Privates of the Royal London Militia. By G. Borlase Childs, F. R. C. S. Exam. Surgeon to the Corps. Dedicated, by permission, to the Right Honourable Viscount Palmerston. London: Churchill, 1854. F.cap. 8vo, pp. 48.

Such is the title of the pamphlet forwarded to us by Dr. Childs for review. We trust that it was his intention we should express a candid opinion upon it, for we should be sorry to bring before the world, except at the desire of its author, any work of which we are bound to speak in such undisguised language as our critical duties compel us to do of it.

We have read many "*Practical Observations*," but none so thoroughly devoid of all claim to the term as this. There is not throughout its pages a single proposition deserving of the appellation.

Dr. Childs, in his position as "surgeon to the corps" of the Royal London Regiment of Militia, delivers to the officers and privates a series of lectures from which they are to derive "that practical information which may enable them, though wounded, to escape, at least, from the horrors of abandonment on the field." Now, considering that the Royal Regiment of London Militia is not likely to serve out of the United Kingdom, and feeling confident that in England no such calamity as that to which he alludes need be expected, we can only suppose that Dr. Childs contemplates the possibility of the regiment being sent over to this country, and of the soldiers being left to the tender mercies of the whiteboys of Tipperary, in the next Ballingarry war, and that, as Dr. Childs has no idea of stopping with them when affairs "look ugly," he thus gives them timely notice that "they may escape, at least, from the horrors of abandonment on the field."

This is, at all events, considerate, and we are confident the officers and privates must feel greatly indebted to him; but, we are equally certain that they would be more likely to receive real benefit by Dr. Childs' packing up his portmanteau and taking a short trip to the East, where he might gain that practical information on "injuries incidental to warfare" which, from his lectures, we are quite sure he cannot now possess.

We select but two passages from Dr. Childs' little book to enable our readers to judge for themselves, satisfied that these will be sufficient to stamp the character of the production. After despatching the consideration of the treatment of injuries of the upper extremities in *seventeen lines*, he proceeds in relation to the lower limbs, and says :—"When the levers of the lower limbs are broken, the case is altered, the soldier falls helpless on the field." Here he is to apply "a strong piece of pasteboard—a *portion of his knapsack*—or two splints. Nothing is easier to the person instructed in first principles. Let the soldier have with him as a part of his necessaries some lint, a bandage, and a small roll of strong adhesive plaster, and a couple of splints; these applied will enable him to get away from further dangers. It is but the work of a couple of minutes."(!!!)

Nothing is easier!!! Can Dr. Childs have ever seen a leg or thigh broken by a shot or piece of shell? We feel assured he has not, or he would never write such nonsense. Picture a soldier on the battle-field with a shattered leg resting in his lap, sitting tailor-like, while he undoes his knapsack, and, scissors in hand, cuts out a pair of splints and fits them on!!! The idea is too absurd.

The next injury of which our author treats (and which he dismisses in a space of sixteen lines), we are in still greater doubt of his ever having witnessed; for he says:—

> "When artillery advance, or retire rapidly, horses are apt to stumble and roll over their riders; or the gun-carriage may be driven over the chest of the dismounted soldier. On recovering his feet (!!!) besides great pain, the soldier feels that he cannot breathe with freedom; that if he moves he is threatened with suffocation, and he naturally imagines that something serious has happened. After all, it may be but a few ribs broken: a large handkerchief, folded like a bandage, and bound tightly round the chest, will test this; very probably enable the soldier to walk off the field as if nothing had happened."

Now, our experience, after seeing some few of these sad accidents, is, that "where a gun-carriage has gone over the chest of the dismounted soldier," the man has not "recovered his feet," and "walked off the field," but either expires on the spot, or soon after being carried off by his comrades.

Mr. Childs concludes his Practical Observations in the following words:—"Permit me to assure you how highly I esteem the honour of your attendance at these lectures, and to express to you the pleasure it will ever afford me to be able to contribute, by my humble efforts, to your amusement."

Dr. Childs has certainly contributed to ours, and afforded us, in reading, an hour's hearty laugh at what he took three hours to deliver. Being unwilling at all times to keep fun to ourselves, we handed the pamphlet to an old soldier experienced in hospital practice for his perusal; and we cannot conclude our observations without giving the veteran's reply to our question of what he thought of Dr. Childs' advice to his regiment:—"He had better," said the veteran, "tell them to carry a small donkey on their knapsacks to ride off upon as soon as they are wounded."

Canstatt's Jahresbericht über die Fortschritte der gesammten Medicin in allen Ländern, im Jahre, 1853. Redigirt von Professor DR. SCHERER, Professor DR. VIRCHOW, und DR. EISENMANN. Würzburg: 1854.

Canstatt's Annual Report on the Progress of Medicine, in all its Departments, in all Countries, during the year 1853. Edited by Professors SCHERER and VIRCHOW, and DR. EISENMANN.

IN quoting from it in our last Number we had occasion to allude to the importance of the above great work, and to its fidelity as a record of the progress of medicine throughout the world; and in a previous volume[a] we have explained its general arrangement, and the mode in which it is conducted. We may, however, remind our readers that each yearly volume, which when completed consists of 1400 or sometimes 1600 large double-column pages, is divided into seven parts, the first being devoted to the physiological sciences; the second, to general pathology, with a valuable report on medical geography; the third, to special or local pathology, under which head the important subject of mental disease receives due consideration; the fourth, to special nosology; the fifth, to therapeutics, pharmacy, operative surgery, &c.; the sixth, to veterinary medicine; and the seventh, to forensic medicine and hygiene.

But the great value of the work does not consist solely in its being an able, faithful and comprehensive record of the vast strides which medicine and the collateral sciences are making in the present day: much of it is derived from the short but valuable critiques added by those, out of the long list of distinguished collaborateurs, representing nearly every seat of learning in Germany, Prussia, Bavaria, and Switzerland, and almost all men of more than European reputation, who are best acquainted with the particular subjects treated of.

The labour of editing so extensive a work must be vast,

[a] Volume xi. of our present series, p. 414.

and, one should think, too much for a single individual; nevertheless, the Jahresbericht was conducted solely, and in the most able manner, by Dr. Eisenmann, during the eight years terminating with 1851. In that year Professors Scherer and Virchow became associated in the task; and we need scarcely add, that the volume for 1853, just now published, is at least fully equal to those which have preceded it.

A Discourse on Medical Botany. By EARL STANHOPE. *Being the Substance of Unpublished Addresses delivered by him to the Medico-Botanical Society, of which he was President.* London: Churchill. 1854. Pamphlet, pp. 47.

THE retirement of Sir James M'Grigor from the Presidency of the Medico-Botanical Society, and the selection of the Earl Stanhope as his successor, led to the delivery of the addresses now before us; their perusal has fully satisfied us of their author's anxiety for the efficient discharge of his Presidential duties, and his zeal in the cause of the natural sciences. In order that our readers may form their own opinion on these points we afford them the following quotation:—

"May I venture, however, to hope that I shall be favoured with your kind indulgence, which I so much require in discharging the duties of this office, and that I may enjoy the happiness, of which I am ardently desirous, of promoting your welfare by my unremitting assiduity, by my industry, which, as I am not employed in any profession, or in any public situation, I am the more able to exert in your service, and by the zeal which, from early youth, I have always felt for the objects of this Society, and which is founded upon my firm conviction that they are the most important and most beneficial to this country and to mankind. In every situation in which I am placed, whether as the President, or merely as a member of this Society, my humble exertions, whenever and wherever they can be useful, will be employed in your service with unabated activity and zeal."

It is peculiarly gratifying to all who labour in the great cause of science to welcome to their ranks those to whom position and wealth prove as incentives to exertion rather than 'title-deeds of sloth.' Philosophic pursuits need to have pleasures and advantages peculiarly their own. Their votaries, abstracted from the generality of mankind, look beyond the passing recreations of every-day life, to find purer and more exalted enjoyment than either wealth can afford or power bestow. Were it not so, how few who consume their midnight oil in gaining an intimacy with the greatness and beauty of creation, could derive from the ulterior advantages such researches too generally afford, rewards commensurate to the patient self-denial and anxious thought they of necessity entail! Earl Stanhope is one on whom the smiles of fortune deservedly fall, who, loving Science for her own sake, thus adds new honours to those which have already shed such lustre on his name. We congratulate the Medico-Botanical Society on their happy selection of a President, who, we trust, will long fill a Chair, the privileges and duties of which he has already so worthily and ably exercised.

A Memoir on Strangulated Hernia; from Cases occurring in the London Hospital. By NATHANIEL WARD, F. R. C. S., &c. London: Churchill. 1854. Pamphlet, pp. 34.

IT has been truly said, that there are few subjects in surgery more difficult in theory and practice than that of hernia: and certainly as regards its differential diagnosis there is none which more demands acuteness and sagacity on the part of the practitioner. This observation especially applies to strangulated hernia. How many blunders are constantly made in the diagnosis of this disease, and how grave are the results arising therefrom! But it is not alone ignorance that may lead to mistakes in hernia: the most experienced and best educated surgeon will frequently be perplexed, and will occasionally err. The diagnosis of strangulated hernia is essentially difficult. No two cases are exactly alike; so that the assistance furnished even by experience loses much of its value; and so apt is the disease to be confounded with other affections, that the wholesome practical rule has been laid down of treating all doubtful cases as hernia, thus guarding against the greater of two mistakes. Such is strangulated hernia as regards diagnosis; it is hardly less important in prognosis, treatment, and other details.

Numerous as are the works on this surgical affection, and many the contributions on this subject which have been made to various journals, the small memoir which lies before us we consider to be a useful addition to what has been already published, being of the greater utility because of its practical form. The author's observations are based on the results of 242 cases submitted to treatment in the London Hospital, during a period of three years and a quarter, and of which 69 were operated upon. The following statistics of these cases are worthy of notice:—

> "Of this number 43 were femoral, 22 inguinal, and 4 umbilical.
>
> "Of the 43 cases of femoral hernia 39 have occurred in the female, 4 only in the male; 28 cases have occurred on the right, 24 of them being in the female, 4 in the male; and 15 on the left side. Among the 22 cases of inguinal hernia, 15 were on the right, and 7 on the left side."

These facts correspond very much with the results of Sir Astley Cooper's experience. With respect to the all-important point of opening or not opening the sac, the author says:—

> "Of the 43 cases of femoral hernia, the sac was not opened in 29, and opened in 13.
>
> "Of the 29 cases of unopened sac, 4 died and 25 recovered.
>
> "Of the 13 cases of femoral hernia in which the sac was opened, 6 died and 7 recovered.
>
> "In the 22 cases of inguinal hernia the sac was opened in all but 3. 14 recovered and 8 died.
>
> "The aggregate mortality in the 69 cases amounted to 21."

Statistics such as the foregoing, though highly interesting, are of far less value in settling the disputed point, as to whether it be preferable to open the sac or not, than might at first sight appear. Unless the cases in which each method has been adopted are alike in every respect—in number, in the period strangulation has existed, in the previous treatment resorted to—no conclusions can be drawn from them in such a way as to establish this much-to-be-desired point in practice. For our own part we always advocate the propriety of opening the sac in *all cases*. The more we see of strangulated hernia the more we feel convinced that the operation for its relief is chiefly dangerous from delay, and that if it be undertaken early, the mortality is as small as that which attends most other operations. The danger of cutting the sac is, we are confident, greatly exaggerated.

With respect to the seat of stricture in femoral hernia, the author observes:—

> "It is curious and confusing to hear and to read the various descriptions as to what is termed the seat of stricture, or what, in my opinion, would be more properly termed the impediment to reduction; for the parts that surround the hernial protrusion can exert no active tightening effect upon it, but are rather themselves rendered tense by the pressure of the rupture, and its products from within, even, I imagine, although the coverings of the hernia may be, as in some forms of inguinal, muscular in their structure. This distention of tendinous and muscular structures, superficial to the

rupture and its sac, in consequence of pressure exerted from within, is admirably illustrated in herniæ other than recent in which the dimensions of the different hernial canals and apertures are so far from normal as occasionally to allow of the easy admission of three fingers, as occurred in one among this collection of cases."

Mr. Ward considers that Gimbernat's ligament is the principal impediment to reduction in this form of hernia, and alludes to the fact that, "in small and recent protusions, an incision of Gimbernat's ligament is quite sufficient to effect reduction." The transverse bands strengthening the sheath of the vessels, to which some attribute the seat of the stricture, he considers as being merely secondary impediments to the reduction of the hernia. These points, though of much anatomical interest, are of no great practical importance.

The next part of the memoir is devoted to the detail of some of the sixty-nine cases which demand most attention; from these much practical instruction may be gleaned. The author very properly condemns what he designates as "the ruthless application of the taxis," and truly remarks that even in the hands of the most experienced the taxis has been attended with serious consequences. In illustration of the latter observation the following case is adduced:—

"An emaciated widow, aged 53, had a strangulated hernia of thirty-two hours' duration; the taxis was carefully and skilfully applied, no undue amount of force appearing to be used. Very shortly after the intestine had been reduced, she gave a loud shriek, complained of violent and excruciating pain, which lasted about an hour, and was then followed by irremediable collapse, and death in three hours after the reduction of the gut. A careful post-mortem examination, in nineteen hours, found the sac protruded through the saphenous opening, the boundaries of which were very tense, as also those of the femoral ring. On opening the abdomen, a strong smell of garlic obtruded on the nose. A small loop of intestine, which had been in the sac, was deeply indented, and contracted at its upper part, the indentation being covered by fibrinous deposit; the corresponding part of mucous membrane had partly ulcerated through. On the posterior part of the gut, nearer the lower than the upper border, was a circular opening, equal in size to the end of a small pencil-case, with a clean cut border in the mucous membrane; a corresponding opening of the serous coat was three times larger, with a ragged circumference; and that of the muscular was intermediate in size. An extravasation of blood was in the subserous cellular coat. The entire intestine partook of the general wasted character of the body, was thin, and possessed little tonicity. In this case the symptoms of strangulation were anything but well marked. At the time of the application of the taxis, or just before, the patient was sitting up in bed drinking her tea; and she had been sick but once, symptoms bearing no proportion to the serious organic lesions, independent of the rupture, revealed by the after-death inspection.

"The substitution for the operation of various forms of medicine on the failure of the taxis appears equally reprehensible with the abuse of the latter, and can only be comprehended by supposing that the surgeon, in consequence of vague apprehension or ignorance of the danger of delay, thinks anything better than the use of the knife, setting up in his own mind the most irrational hopes of the recovery of his patient, the realization of which would be akin to miraculous."

Nothing can be more true than this remark. Many a life has been sacrificed by a condemnable timidity in resorting to the operation upon the one hand, and upon the other, by culpable reliance on the taxis and its auxiliaries. It should never be forgotten, that while the surgeon is employing the warm bath, purgatives, opiates, local applications, &c. &c., the disease is making rapid progress, and is pushing the patient nearer and nearer to death. The picture drawn by Dieffenbach of the unhappy doctor who sweated for an entire day over a hernia, vainly endeavouring to effect the taxis; who brought to his aid clysters, castor-oil, and croton-oil; linseed oil, with saltpetre, and twenty grains of calomel, cold applications, &c., at length, in a paroxysm of laudable enthusiasm, leaped into the hot bath with the patient, and, placing his legs over his shoulders, thus manipulated,—though, doubtless, somewhat coloured,—is a fair burlesque of what is often witnessed. How often do we find the full therapeutic artillery brought to bear with the most unflinching perseverance in strangulated hernia: enemata (cathartic, and of tobacco), purgatives by the mouth, opiates, chloroform, the warm bath, and even venesection, each plied in succession, and all to no effect, until at length the operation is resorted to, but it comes too late!

The medical treatment subsequent to the operation the author considers should consist in the administration of solid opium. This medicine he recommends in all cases, "as being one of the most powerful antiphlogistics we possess." We cannot, perhaps, go as far as Mr. Ward in his advocacy of the universal applicability of opium in these cases; still we are fully aware of its great advantages in many instances.

Sudden Death. By A. B. GRANVILLE, M. D., F.R.S., &c. London: Churchill. 1854. Royal 12mo, pp. 286.

SUDDEN death! What an exciting theme for the divine, the philosopher, and the moralist, have these two words over and over again afforded, and how few can read or hear them without an inward shudder at the mystery wrapped therein! To the physician, too, they are full of interest, involving so much of the study of life, so much of the results of disease. How is it to be foretold? How, when apprehended, to be prevented, or its approach warded off? Studied by every writer on the practice of medicine in connexion with disease *generally*, it is, in the volume before us, considered in connexion with disease *specially*. But more particularly does Dr. Granville describe it as the result of "head diseases," dividing the subject into two branches,—

> "The one, popular, statistical, and philosophical, relates to matters of fact and occurrence in connexion with sudden death, apoplexy, and paralysis, which have not been duly noticed or appreciated before. The other, medical and practical, embracing an extended view of the causes, increasing frequency (especially among comparatively young people), treatment, and prevention of those formidable disorders, together with a section on longevity, or death from old age."

The first branch alone of the inquiry is considered in this volume, which, however, is complete in itself, the subject being treated of under the following chapter headings:—I. Recollections.—The Consultation Room. II. The Registrar-General. III. Death Statistics. IV. Early Destruction of Life in England. V. Frequency of Sudden Death.—Facts. VI. What is Sudden Death? VII. Conclusion.

The entire question is considered by the author in a philosophic style, and the facts contained presented in eloquent language; indeed we have been so charmed with Dr. Granville's book that we abstain from any attempt at an analysis of its contents, with the view of inducing our readers to peruse it for themselves. We venture to predict that thereby they will obtain many practical hints, and have their attention awakened to points which, in the hurry of a busy professional life, often pass unnoticed, yet which are of real interest to the welfare of their patients, and from an attention to which more correct views of prognosis will be derived. We strongly urge on the author the completion of his work, by hurrying on the publication of his second volume, for which his materials must be amply sufficient, and we hope the profession will second our appeal by the interest which will be exhibited in that now on our table.

Suggestions for Improvements in the Sewerage of Cities and Towns. By Charles F. Moore, M.D., &c. Dublin: Hodges and Smith. 1854. Pamphlet, pp. 12.

Just at present, when cholera is paying an epidemical visit to our islands, no question could be raised of more importance to the physician or the philanthropist than one regarding sanitary arrangements. No matter how authorities may differ as to the contagious or non-contagious character of that, or of any other disease, all are agreed that deficient sewerage, insufficient ventilation, and unwholesome food or the want of a due supply of nourishment, with their necessary concomitants, are powerful *predisposing* causes, which, when acting on the human frame, render it less able to resist the *exciting* causes, be they what they may. In the pamphlet before us, as its title indicates, one of these predisponents is considered, and suggestions offered for its future prevention. We rejoice to find that an able and observing physician, who, as our pages, in a former and in our present Number, bear testimony, has not visited foreign countries, or for years traversed the seas, unmindful of his profession, should have directed his talents to an inquiry which bears so directly on that first law of nature, the health of the people. His views are sound and philosophical, and we strongly commend his "Suggestions," which appear to us to be simple and easy of application, to the serious consideration of those intrusted with authority to regulate what, as a general rule, is most disgracefully neglected, "the sewerage of our cities and towns."

PART III.

MEDICAL MISCELLANY.

TRANSACTIONS OF THE ASSOCIATION OF THE FELLOWS AND LICENTIATES OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

(*Continued from* p. 204.)

Fifth Meeting, March 1st, 1854.

Professor Law read a paper illustrating the various changes which occur in false membranes, and the influence they exercise in modifying the phenomena of disease[a].

Dr. Churchill read a paper on paralysis occurring during gestation and in childbed[b].

Sixth Meeting, April 5th, 1854.

Professor Osborne described a case of diaphragmatic hernia, which occurred several years ago in Sir Patrick Dun's Hospital, but which he had not brought forward at the time, in consequence of the original notes of the case and the sketch of the appearances after death having been accidentally mislaid, and only of late recovered.

The individual was a stone-cutter of Kingstown, who died with symptoms of phthisis, to which had supervened diarrhœa and dysentery. On examination after death, the stomach, the arch of the colon, and a great portion of the small intestines, were found in the left side of the thorax, having passed into it through an opening in the diaphragm of about four inches in diameter, encircled with a firm tendinous edge, to which they were firmly adherent. The œsophagus, after passing into the abdomen by its usual opening, reentered the thorax by this large orifice, a fact to be recollected in the consideration of the case, and which was attended by a necessity for eating slowly and cautiously, so that during his illness the nurse was obliged to cut his bread into small fragments.

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[a] Will be published at length in our next Number.

[b] Published at length in this Journal, No. 34, May, 1854, p. 257.

Dr. Osborne set a high value upon this case from the refutation it presented to Magendie's theory of vomiting. Here *the stomach was in the thorax, and removed from the pressure of the diaphragm and abdominal muscles, and yet the individual repeatedly vomited during his sojourn in the hospital.*

While on this consideration of the case, he wished to mention two other cases which appeared to him to demonstrate the action of the stomach itself in the performance of vomiting. The first was that of a man with a large mass of indurated structure attached to the pylorus, and who was greatly emaciated, so that his abdominal viscera could be distinctly felt by application of the hand. When he vomited, the pylorus was manifestly jerked over towards the right side, after which it immediately resumed its former position. The second case proved (what some appear to have lost sight of altogether) that the closure of the pyloric orifice must be effected before the contents of the stomach can be projected up through the œsophagus. This was in the instance of an elderly woman in Sir Patrick Dun's Hospital, who had a great portion of the stomach ulcerated, with extreme emaciation and pain on taking food, but during her last illness she never vomited, and this occasioned much perplexity as to the real nature of her disease. On examination after death, however, the reason of it was fully apparent. The pyloric ring was almost entirely destroyed by ulceration, and instead of it an opening formed in the indurated structure of above an inch in diameter, which could not be closed, being firmly held by adhesions to the adjacent parts. In this case there were the same efforts and the same depressing sensation as in vomiting, but it never occurred, and was superseded by purging of the sanious discharges from the ulcerated surfaces.

It has been observed that in some families, although susceptible of nausea from sea-sickness, and although experiencing a sensation of internal or downward vomiting, yet they never vomit. This fact may be explained by a peculiarity of the pylorus preventing it from perfect closure, and as family likeness consists in peculiarities of features or of countenance, so in those individuals the pylorus may keep up the family likeness in its patency and inability of contracting to that degree requisite for vomiting.

The second matter for consideration suggested by this case is the probability of the existence of congenital defects in the median line not hitherto investigated; such defects occurring externally as hare lip, cleft palate, spina bifida, or umbilical hernia, are never overlooked or mistaken, but in the interior they are never suspected, and do not enter into the contemplation of the practitioner. Yet they may occur, and it is important that we should be aware of those which have up to the present time been the subjects of actual observation.

Dr. Osborne once witnessed an imperfection of this kind in the median line of the œsophagus, leaving a longitudinal slit between it and the trachea of above an inch in length, and commencing about two inches below the larynx. The individual was a young man long subject to a cough, which chiefly affected him at meals, but who in other respects enjoyed good health. One morning, while eagerly eating his breakfast of beefsteak and conversing with some friends, he happened to laugh, and while in the act was seized with the agony of immediate suffocation, and died in a few minutes. On examination of the body it was found that a tough and imperfectly masticated piece of beef had passed through the slit in the trachæa, which it had nearly closed like a cork in a bottle, and that a part of it was still retained in the slit. The edges were smooth and tendinous, and it was evident that the beef while on its passage down the œsophagus, happening to arrive at the slit at this unfortunate moment, was drawn into the trachea by an act of inspiration, with which a fit of laughter always commences. The reason why this individual lived so long with this defect is to be sought for in the extreme rarity of the coincidence of a violent inspiration with the presence of either liquid or solid food exactly at the slit; a coincidence, which, according to a computation of chances, might never have occurred, even during the longest life. A preparation of the parts, with the piece of beef exactly as found, is in the Museum at Mercer's Hospital. Dr. Osborne published an account of the case in the London Medical Gazette, but as that work remains up to the present time a *caput mortuum* for want of an index, he felt justified in bringing it forward on the present occasion.

The occurrence of similar congenital openings in the diaphragm, although of the utmost rarity in the adult, as appears from the small number of cases recorded, yet may be frequent in the fœtus, and, for aught we know, may be the cause of death in many at the moment of birth; such cases being set down as *still-born*, are rarely subjected to anatomical examination, and this defect, which must prove fatal in the great majority of instances at the commencement of extra-uterine life, is consequently most likely to remain undetected and unsuspected. The investigation of it, however, should be a matter of interest not only to the abstracted physiologist or pathologist, but still more so to the midwifery practitioner, who seldom fails to receive more than his share of the blame so liberally and indiscriminately bestowed on all such occasions.

Seventh Meeting, May 3rd, 1854.

Dr. M'Clintock made a communication of considerable length upon the reciprocal influence of pregnancy and disease, a brief abstract of which paper is here given. One great object which he had in view, in selecting this subject, was to put before the Association the strong claims it had upon the attention of practical men, especially those connected with large medical hospitals. That it had not received a greater share of notice was not, he maintained, fairly chargeable on the accoucheurs, as cases answering this description are rarely met with in the wards of lying-in hospitals. It was only of late years that physicians had begun to study, with any degree of care, the complications of diseases, their mutual reactions and combined effects; and therefore it was not to be wondered at if the subject now brought forward was yet in its infancy. The standard works upon midwifery gave absolutely no information respecting it; at least little beyond some casual allusions. Besides small-pox, phthisis, pneumonia, syphilis, and paralysis, he did not know of any other disease which had been studied under this particular aspect. Dr. M'Clintock dwelt upon the importance of carefully noting, in any case of the kind, all the circumstances connected with the disease and the pregnancy. On the side of the disease, any modification it may present in its symptoms, termination, and in the effects of treatment, deserve to be registered; and as regards the gravid state, it is important to note how far gestation is advanced, whether it be the woman's first or subsequent pregnancy, the apparent influence of the intercurrent disease on gestation, the exact period of this disease at which abortion or premature labour occurs (where this does occur); the state of the fœtus at birth, and whether the woman aborted before. As an encouragement to the steady pursuit of this inquiry the author alluded to the interesting and valuable facts already brought to light respecting the few diseases which have been studied in their relation to pregnancy.

The whole subject was viewed under two aspects: first, the influence exerted by diseases upon the process of gestation, and secondly, the influence which utero-gestation possesses in modifying morbid action. These two questions, the author remarked, admitted of being examined independently the one of the other; but he deemed it more judicious not to separate them, and to this course he adhered throughout his paper. In considering the diseases which might complicate the gravid state, they were divided into acute and chronic—a distinction not less practically useful here than elsewhere. Before coming to the particular examples under each of these two great classes of disease, some general observations were made in respect to each class. There was a very striking difference among diseases in relation to the great function of gestation; some affecting it early, some late, some with great certainty, as small-pox, syphilis, and pneumonia; others with less; and a few, as jaundice, ague, and perhaps paralysis and bronchitis, hardly at all. It would in itself (continued the author) be an interesting and profitable subject of inquiry to ascertain the comparative frequency of abortion or premature labour, in the various morbid states of particular organs, and in the different zymotic diseases. As yet the amount of data we possess on this point is wholly insufficient to lead to any reliable conclusions.

The author is of opinion that women with child enjoy some degree of exemption from the attacks of acute diseases, and in this opinion he is supported by Dr. Copland. He thinks this is in great measure to be explained by the better care and better hygienic precautions adopted by females during the period of gestation, and their more prompt attention to the first symptoms of illness; but at the same time he admitted the influence of the apparent physiological law that, during the continuance of any one active operation, the system is not liable to be acted on by another.

With one very remarkable and well-known exception, chronic disease did not seem to possess any influence over the process of utero-gestation. Whether or how far the converse of this might be true, he did not take upon him to say, but he inclined to the opinion that chronic diseases were rather accelerated than retarded or suspended in their course by conception and its results. The organic operations, whether of a curative or destructive kind, going forward in the diseased part, would seem to be stimulated to increased activity under the influence of pregnancy, so that their progress to a termination, no matter whether favourable or the reverse, is materially hastened. By adopting this view, which seemed rational and consistent with the physiology of the gravid state, he thought we might be able to reconcile some conflicting statements on this point, and explain the totally opposite results which follow upon impregnation in different cases of chronic disease—one patient being sensible of a decided improvement in all the symptoms of her complaint, whilst another experiences a no less striking aggravation. A popular notion prevails that pregnancy temporarily suspends or arrests the march of a chronic disorder; but, on the grounds above stated, Dr. M'Clintock felt inclined to doubt the correctness of this opinion, adding, that in the only disease (pulmonary phthisis) which had been carefully investigated, with a special reference to the point before us, this suspending power was shown not to exist.

Dr. M'Clintock next proceeded to the examination of some particular diseases in their relations to and influence upon pregnancy, beginning with small-pox. His data on this subject were chiefly drawn from Dr. Pearson's paper in the Edinburgh Commentaries. From this he passed on to vaccination, and stated his belief that no practitioner in this country would hesitate to vaccinate an unprotected female, during an epidemic of small-pox, merely because she happened to be pregnant; and cited the authority of the late Dr. Labatt in proof of the safety of the practice. These observations, Dr. M'Clintock said, he would have thought it superfluous to introduce, had not a totally opposite opinion been expressed, in language, too, the most unqualified, by Professor Meigs, of Philadelphia, in his large treatise upon midwifery, entitled, "Obstetrics; the Science and the Art."

Pneumonia was the next disease brought under notice in connexion with pregnancy. For the facts on which his remarks were founded, in relation to this subject, the author expressed himself largely indebted to the industry of M. Grisolle, who had recorded *four* cases of pneumonia in pregnancy that had come under his own immediate care, and had brought together the leading particulars of *eleven* others, from the published works of various authors. To these Dr. M'Clintock was able to add three more from his own notes, making in all *eighteen* examples of pneumonia occurring in the gravid state. A careful analysis of the histories of these eighteen cases yielded the following results. Out of the entire number (eighteen) fourteen cases proved fatal; and of these fourteen women, four aborted; two were delivered of premature children; and in eight no attempt at parturient action took place. Of the *four* women who recovered, one aborted; two were prematurely confined; and in one solitary instance the cure of the pneumonia (which only occupied one lung) coincided with the continuance of the process of gestation, the woman carrying her child two months longer, to the full term. This mortality was excessive contrasted with that of pneumonia under similar circumstances, saving the pregnancy, as shown by the Tables of M. Grisolle. The fatal influence which pulmonary complication exerts upon the course of fever in women with child was also exemplified by an analysis of nineteen cases.

From the consideration of pneumonia Dr. M'Clintock passed on to that of phthisis, in its mutual relation to pregnancy, and gave a succinct *resumé* of the reports of M. Grisolle and of M. Dubreuil upon this very interesting question. His own general experience was rather at variance with the conclusions of these gentlemen; but as their inferences were derived from statistical data, and professed to be founded on carefully recorded facts, it was more probable, he said, that they were right and he was wrong. In concluding, he observed that he was obliged to omit the notice of many diseases on which a good deal might be said. In this list were fever, dysentery, measles, epilepsy, jaundice, cancer, ascites, and cholera. The facts and observations collected respecting these diseases, when affecting pregnant women, would form, he hoped, the subject of some future communication.

Dr. Osborne gave a short and necessarily imperfect sketch of all the autobiographies of physicians now extant. The entire number of them, as far as he could collect, is only eight; they are as follows:—Hieronymus (Ardan), who died 1575; Boerhaave, 1737; Haller, 1777; Rutty, 1775; Denman, 1815; Weikard, 1803; Clark, 1834; and Cheyne, in 1835. Of those, Rutty, Clark, and Cheyne, belonged to this College; and the recollection of the latter two is still cherished by our senior members. Haller was stated, by the late Dr. Stephen Dickson, to have been a candidate along with Linnæus and Albinus for the professorship of physic on the foundation of Sir Patrick Dun, in 1748, but they were all deterred when they learned that it was to be divided into three. The diary of Haller, and the memoirs of himself by Weikard, have never been translated from the German, although both are replete with interesting matter.

Eighth Meeting, June 7, 1854.

Dr. Lees read the particulars of a case of parotiditis with metastasis to the brain and testicles in a gentleman aged forty-five, to whom he was called in the evening of February 11, and whom he found suffering from high fever, with skin burning hot; pulse 120; he talked incoherently, but was conscious he was talking nonsense, and complained that the room appeared turning round with him; he also said that he felt very chilly; that he had pain, with a sense of constriction, across his forehead, and severe pain across the loins; he had been out driving that day in his usual health, but had returned both cold and thirsty; he was given some diaphoretic medicine, and was somewhat better next day, but felt very much fatigued, and had fever still on him, with severe pain in the eye-balls. He passed a very restless night, and appeared very heavy and depressed in spirits; tongue coated with a thick fur; pulse 100. Dr. Lees thought he was now in for a regular continued fever; but on returning to see him in a few hours was agreeably surprised at finding him much better, and in the evening the fever was nearly gone. He spent a good night, and appeared to be convalescent the next morning, but complained of his left testicle being swelled, though not causing any pain; he then stated (on being questioned particularly with regard to it), that he had felt a slight stiffness in his jaw a day or two previous to the present attack, but that it was of so trifling a nature he did not mention it to any one. He also stated he had paid a visit to a house about a week previously in which some children had been laid up with mumps, but that he had not been in contact with them. He recovered in a few days by keeping quiet, and very mild treatment.

Dr. Lees thought the case interesting, from the disease occuring at such an age, as well as from its insidious nature, and the order in which the parts were attacked, as in the natural course of this disease the metastasis occurs to the testicles in the first instance, and then to the brain; but in this case the reverse took place. The line of treatment was also worthy of remark: very mild remedies were used, owing to the true nature of the case not being suspected; for the plan of treatment laid down by Dr. Watson, and in all systematic works, is to treat these cases of metastasis of mumps to the brain in the most active manner, as if they depended on actual acute idiopathic inflammation of that organ. He, therefore, thought this point to be one of great practical importance, whether it would be safe to trust to mild expectant treatment in these cases of metastasis to the brain, and allow the disease to run its natural cycle unchecked, or whether it was absolutely necessary to subject a patient to the severe treatment laid down in systematic works.

Dr. Ringland detailed the particulars of the following case:—He was consulted for the first time on the 25th of April last by a lady aged thirty, of full habit, married about sixteen months. She informed him that she had enjoyed most excellent health up to the period of her marriage, and subsequently had merely suffered from the ordinary annoyances attendant on pregnancy; that about nine months since she had been prematurely delivered of a seven months' child, after a labour of more than three days and a half; that the membranes had ruptured on the evening of the second day; and that the placenta, having been retained for a considerable time, was eventually removed by the hand. She likewise informed him that there was no appearance of lochia whatever, but that a leucorrhœal discharge ensued immediately on her delivery; that one or two days subsequently sloughs of a most offensive odour began to separate in large, long, and ropy masses; that these continued to be discharged for more than a week, and that they suddenly ceased.

Three weeks subsequently she had the usual indications of menstruation, but without any discharge, although the expulsive efforts continued during four days—her usual period. A fortnight afterwards these symptoms returned, and lasted six days, but with the same result. Again and again corresponding attempts at menstruation recurred, the expulsive efforts becoming more severe, and of longer duration, whilst the intervals became less, until, at length, the continuation of the pain was prolonged to nearly three weeks, and the period of freedom from pain did not exceed four or five days. She enlarged considerably in size, suffered a good deal from sickness, and had occasional shooting pains through her breasts, and, in fine, was pronounced to be pregnant by a medical man whom she consulted. Other medical men gave her various opinions, and she was submitted to a great variety of treatment, including the employment of leeches, hip-baths, and mercury. Her sufferings, however, increased, and life, at length, as she said, became a complete burden to her.

On placing his hand upon the abdomen, Dr. Ringland found the uterus very much enlarged, and reaching above the umbilicus When he examined her by the vagina, he was unable to pass his finger more than about two and a half inches, when it was stopped by a firm elastic tumour, which was manifestly affected by the slightest pressure on the fundus of the uterus; he could not discover the cervix uteri; there were, however, two slight depressions on the floor of the vagina, one anteriorly, the other posteriorly.

On the following day, April 26, he made a still more minute examination, and for this purpose he employed the speculum, which, however, supplied no additional information; he also attempted on this occasion, but without success, to pass a small sound through each of the two depressions already alluded to in the upper part of the vagina. He now examined by the rectum, and found the neck of the uterus free, and far above the highest point the finger could reach within the vagina. Although, from the history of the case, as well as from his examination on the preceding day, he had no doubt as to the nature of the case, he was now fully confirmed in the opinion he had previously formed, that occlusion of the vagina had taken place, union of the walls of that canal having occurred after the separation of the sloughs which had ensued upon her protracted labour.

On the 28th of April he had the advantage of a consultation with Dr. Evory Kennedy, who coincided with him in the opinion he had already expressed both with regard to the nature of the case, and to the imperative necessity which existed for an operation as the only means whereby the patient could derive relief.

Her general health being good, her constitution unimpaired, her pulse perfectly natural, beating 76 in the minute, and there not appearing to be the slightest derangement of any of the vital organs of the body, they saw no objection to the employment of chloroform. Her bowels having been previously evacuated, and a state of anæsthesia having been induced, Dr. Kennedy, on May the 1st, made a careful dissection, to the depth of about one inch and an half, through the septum, which was brought to view by means of blades carefully introduced into the vagina, and kept divaricated by Dr. Ringland, assisted by Mr. Carpenter. Scarcely, however, had the upper chamber of the vagina been reached, when they observed their patient frothing at the mouth, her eyes wide open, and perfectly opaque, her lips livid, and her face almost purple; they could discover no pulse at the wrist, and the heart's action appeared suspended. No time was lost in applying restoratives; artificial respiration was unceasingly carried on, the lungs being first inflated with air, and then evacuated by pressure on the diaphragm and ribs, the greatest amount of pressure, however, being applied over the region of the heart. Cold water was dashed upon her face, and stimulants held to the nostrils; warm blankets and sinapisms were applied to the lower extremities, and sinapisms likewise to the region of the heart; while friction of both the upper and lower extremities was assiduously carried on.

During the space of nearly fifteen minutes the sounds of the heart's action were inaudible when (not being provided with a stethoscope) the ear was placed over its region; the extreme urgency of the symptoms, however, compelled almost exclusive attention to be given to the employment of restorative treatment, and did not permit close examination.

Meanwhile the employment of the foregoing means was persisted in without the slightest intermission, and at length, after the lapse of the time already stated, she evinced signs of returning animation, indicated by the heart's action having become feebly audible; in a short time more she was so far recovered as to utter one or two words in reply to questions put to her.

Scarcely, however, was consciousness restored when the pent-up secretion of so many previous months began to ooze out through the opening already made, and in a very short period upwards of two quarts of a thick, grumous fluid—somewhat resembling tar—but altogether devoid of smell, was eliminated. The exhaustion caused by this sudden evacuation of the uterus, of so large a quantity, was so great that a condition similar in all respects to that already described was reinduced, and for a period of nearly ten minutes she continued in the balance between life and death. Stimulated by the success which attended their first efforts, they were commenced again, and with renewed vigour, and her medical attendants were shortly gratified by the return of animation. At this period they were joined by Dr. Fleming, who assisted them in the continuous use of restoratives. For some hours her pulse was small and shabby, pulsating only 48 in the minute, and intermitting every fourth beat. She vomited repeatedly, and whenever she did so the pulse fell still further, and was occasionally so low as 40. The discharge from the stomach was slimy, thick, and ropy, and there was frequently much difficulty in removing it from the mouth and throat, so much so, that the danger of suffocation repeatedly appeared imminent. Iced soda water and brandy alone had the effect of restraining it, many other remedies having been had recourse to in vain. In consequence of her depressed condition it was deemed advisable not to interfere at that time with the opening through the septum, further than to introduce a piece of lint into the wound, whereby the incision was kept open. Throughout the afternoon a considerable quantity of thick grimy fluid, similar to that already described, continued to be eliminated; this, however, after the lapse of some hours, changed into a thin sanguineous discharge. Towards evening, when the vomiting had ceased, she slept uneasily for short intervals, but invariably awoke greatly frightened, and with considerable delirium; her pulse, however, had somewhat improved, having increased to 60, but it receded to 48 on her making the slightest effort, and it even ceased to intermit at every fourth beat. Dr. Ringland, who had not left her since the operation, now deemed it advisable to give her a full anodyne in iced soda water and brandy, after which she had several hours of good, and, in a great measure, uninterrupted rest.

On the following morning all delirium had left her; she complained of intense headach and burning sensation in her throat; her pulse was 68, very small and without intermission, but on her making the least attempt to move it fell to 48, and again intermitted. A small-sized bougie was now introduced through the wound and left for a short period. Cold lotions were ordered to be applied to the head; and stimulant draughts to be administered at intervals through the day.

On May 3rd she was in all respects better; her pulse was steady at 48, and without any intermission; her appetite, which had entirely left her, had returned. A bougie somewhat larger than that employed the preceding day was retained in the wound for about an hour, and as a precaution she was ordered alterative doses of mercury.

On the 4th, Dr. Kennedy enlarged the opening with a carefully guarded scalpel, having first introduced an ivory director. A moderate-sized bougie was then introduced and permitted to remain about two hours. The discharge on this day had become much thinner, its colour too had changed; it was now a pale green, and somewhat resembled the lochia about the fourth or fifth day after delivery.

Graduated bougies were subsequently introduced from day to day, and were at length retained many hours without inconvenience.

There being a tendency in the opening to contract, a thick, hard and almost cartilaginous ring being formed all round it, Dr. Kennedy again, on May 9th, enlarged it by making a number of slight incisions all round its edge. By means of Weiss' rectum speculum, which was used as a dilator, the opening was daily enlarged, and small pieces of thick wax candle, used as bougies, were daily worn by her for many hours.

On the 13th of May, all discharge had ceased, and the wound was continuing open without any tendency to contract. On the 17th, a number of large unhealthy granulations was found about the wound, which were then, and have been occasionally up to the present, touched with a ten-grain solution of nitrate of copper. She has since progressed most favourably, and by the 20th had so far recovered as to be able to resume her household duties, and to take a moderate amount of out-door exercise daily. Menstruation returned on June 10th, and continued the ordinary period; after it had ceased, the opening was found in a tolerably healthy condition, with but a few small grandulations around it.

The chloroform was administered in the first instance through Luër's inhaler, which, however, produced only partial anæsthesia; a towel was then substituted for this instrument. The quantity of the drug used during the operation, and which was procured on the day preceding it, at one of the most respectable chemists in the city, amounted to about half an ounce, the greater part of which, however, was wasted on the towel employed in its administration.

Dr. Ringland, in conclusion, stated that he felt no hesitation in bringing this case before the profession, as he was of opinion it possessed many points of practical interest. In the first place it proved that cases of sloughing of the vagina should not be either lightly treated or carelessly overlooked, but that in such cases there existed an imperative necessity for prompt and at the same time prolonged and judicious treatment, so as to obviate the adhesion of the walls of that canal, and the consequent performance of the serious operation which alone can remedy the accident. Again, it shows that when such a casualty has arisen, it is perfectly amenable to treatment, and that the original condition of the parts engaged can be thereby in a great measure restored; next, that there does not as yet exist sufficient data from whence to conclude with certainty in what class of cases chloroform may be used with safety in contradistinction to those upon which it may exercise a baneful influence; and finally, that when the use of this drug has unfortunately produced an injurious effect, so as to cause a suspension of animation, the most strenuous efforts must be unceasingly employed until either vitality has been completely restored, or the most remote possibility of such a result hopelessly abandoned.

ILLUSTRATIONS OF FRENCH OPERATIVE SURGERY[a].

I. *Ivory Exostosis occupying the entire Right Lateral Mass of the Ethmoid Bone; Complete Extirpation; Rapid Recovery, with perfect Preservation of the Functions and Movements of the Eye.*

M. MAISONNEUVE presented to the French Academy of Medicine a young man in whom he had performed, three weeks before, the extirpation of an exostosis of the entire of the right lateral mass of the ethmoid bone. This tumour, which was of the size of a small egg, and was as hard as iron, had pushed the eye completely out of its orbit, causing intolerable pain to the patient. By an operation as successfully performed as it was boldly conceived, M. Maisonneuve accomplished its entire removal; and, what is more remarkable, the eye, when replaced in the orbit, completely recovered the power of vision. All its motions were preserved, and the countenance did not present the slightest alteration. The following are the details of the operation—

Case.—Theodore Joffrin, aged 22, labourer, of a robust constitution, states that about the commencement of the month of March, 1853, he began to feel a sense of weight and dull pains in the region of the orbit; at the same time he perceived that the right eye was becoming more prominent than the other. The orbital pains soon becoming intense, giving a sensation as if the eye was squeezed in a vice, he repaired to Paris to consult M. Maisonneuve at the Hôpital Cochin.

He was seen, for the first time, by this surgeon, on the 5th July. The eye was then completely out of the orbit, and was pushed very much towards the temple. The eyelids covered it very imperfectly, and the conjunctiva was somewhat inflamed. The tears, however, followed their regular course, and it was remarkable that vision was not wholly lost. At the internal angle of the eye the rounded point of a tumour, which evidently extended to a greater depth, was perceptible to the touch, and its presence became more manifest when the soft parts were depressed. This tumour was of bony hardness; it was little sensible to pressure, but was the seat of dull pains, which were extremely harassing to the patient, and deprived him of sleep. The corresponding nostril was free. From these symptoms M. Maisonneuve diagnosed an exostosis, probably eburnated, of the internal wall of the orbit.

The patient could give no information as to the probable cause of the disease. He had never suffered from sunstroke, never had syphilis, nor had he laboured under cutaneous affections, or scrofulous symptoms. Nevertheless, M. Maisonneuve thought it right, before undertaking any operation, to place him on the use of preparations of iodine. He was accordingly directed to take half a drachm of the iodide of potassium in the twenty-four hours. This treatment was continued only for about a fortnight, because the tumour, far from diminishing, continued to make sensible progress, and, above all, because the pains had not yielded in the least.

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[a] [We are indebted to the kindness of our friend Dr. Debout, editor of the Bulletin Thérapeutique, for the use of the woodcuts with which the following selections are illustrated.—ED.]

The patient being extremely anxious for the operation, M. Maisonneuve proceeded on the 14th July to perform it in the following manner:—The patient having been previously brought under the influence of chloroform, all the internal portion of the circumference of the orbit was included in a semicircular incision, commencing above the eyebrow. The soft parts were afterwards dissected down to the bones, so that the periosteum comprised in the flap brought with it the orbicular muscle, and even the pulley of the superior oblique. This rapid dissection exposed the entire of the anterior portion of the tumour, and a part of its internal surface. Before proceeding further, it was necessary to tie three or four small arterial branches, after which the difficult part of the operation commenced.

The tumour, impacted in the internal wall of the orbit, filled more than two-thirds of this cavity. Its base did not present any constriction, and seemed to be continuous, not only with the internal, but also with the superior and inferior orbital walls. Its posterior extremity was too deeply situated to admit of the possibility of circumscribing it. The anterior part alone presented a nipple-like projection, on which one might lay hold. M. Maisonneuve, at first, endeavoured to attack this exostosis with the circular saws (scie à molette) of M. Charrière, M. Martin, &c.; the narrowness of the cavity in which it was necessary to manœuvre rendered it impossible to use these instruments. Liston's forceps were then tried, but the texture of the tumour was so hard and compact, that this instrument, in spite of the most strenuous efforts, did not even mark it. More than half an hour was passed in these fruitless attempts; twice Liston's forceps broke under the united efforts of the surgeon and two assistants. Another forceps, furnished by M. Charrière, who was present at the operation, met the same fate.

Convinced that nothing was to be expected from these instruments, M. Maisonneuve sent for a wrought-iron chisel, and with the assistance of this and a mallet he endeavoured to chisel off the tumour. The latter still resisted; one of its projections only, as large as a hazel-nut, was detached after many efforts, and was knocked off to a considerable distance. This result, apparently very trifling, was in reality the circumstance which led to success. In fact, behind this projection the tumour presented a groove or fissure, at the bottom of which the bony tissue was less dense. The chisel being violently struck with the mallet, at last penetrated to a certain depth, and the operator soon ascertained that the tumour had become movable.

This mobility was, however, but very slight, for an attentive examination was necessary in order to positively determine its existence.

A great result eventually was obtained; this tumour, so refractory to every attempt at section, became detached *en masse;* it was movable; it seemed that almost nothing was left to do in order to complete its dislodgment; but new difficulties still awaited the operator. This ivory tumour formed towards the nasal fossæ an embossment nearly similar to that which it presented in the orbit, and these two portions were as if strangulated by a sort of bony ring, formed superiorly by the frontal, and inferiorly and anteriorly by the superior maxillary bone and its ascending apophysis. It was only after long and laborious efforts, by means of levers of all sorts, forceps, &c., that the tumour could at last be extracted in a single block. M. Maisonneuve immediately introducing his finger into the deep excavation left after the extirpation of the tumour, ascertained, not without some surprise, that the interior of this excavation was perfectly smooth, and covered with a sort of down-like membrane. No apparent communication existed with the maxillary sinus, nor even with the nasal fossæ.

During the entire of this difficult operation the eye had not been for an instant pressed upon; care had been scrupulously taken to avoid injuring the bones adjoining the tumour. Therefore, M. Maisonneuve did not hesitate, after having replaced the eye, to bring the lips of the wound together by means of the twisted suture. The whole operation lasted an hour and a half. The patient had repeatedly aroused from under the influence of the chloroform, and had each time been again thrown into the anæsthetic sleep.

In reading the details of this laborious operation, we cannot avoid fearing that serious consequences might ensue either with respect to the brain, the deep-seated parts of the face, or particularly the eye. Nothing of the kind occurred. The eye when replaced almost immediately resumed its functions; even its movements were all perfectly preserved; the wound united by the first intention, and there was scarcely any perceptible traumatic fever.

The examination of the tumour showed that it was bony and completely eburnated, its general form resembling that of the ethmoid bone (Figs. 1 and 2). Its antero-posterior diameter was 0·05 (nearly two inches); its transverse and vertical each 0·04 (rather more than an inch and a half). The internal surface was smooth and regular; the external, convex and mammillated. The superior presented anteriorly a deep excavation, in which the marks of its having been broken off were visible. It was here that it was attached to the frontal bone for an extent of two centimetres (rather more than three-quarters of an inch).

The anterior surface was divided vertically by a groove, the mammillated borders of which embraced the ascending apophysis of the maxillary bone. Finally, the posterior rather resembled a rounded edge; the superior tubercle of which corresponded to the optic foramen. The tumour weighed twenty-eight grammes (very nearly one ounce avoirdupois).

When the patient was presented to the Academy it was difficult to say on which side the operation had been performed. The cica-

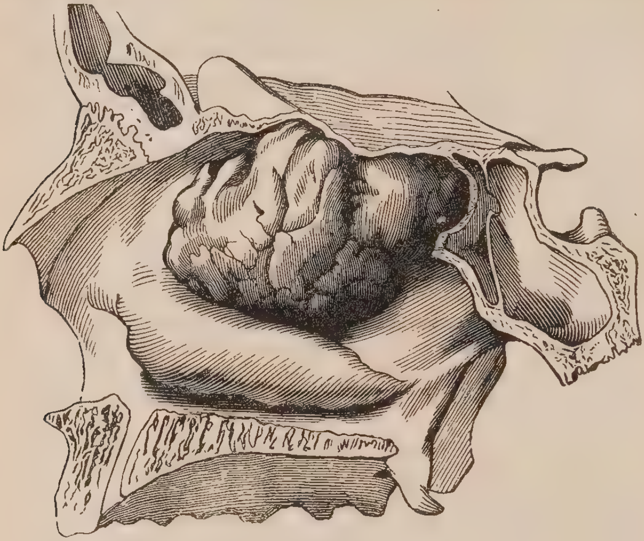


Fig. 1.

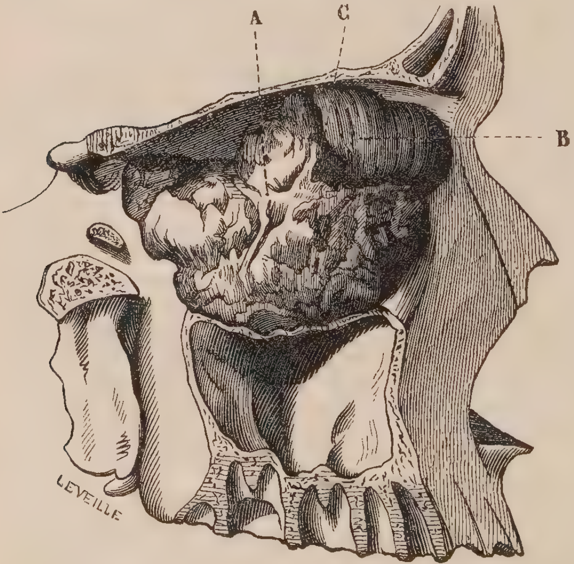


Fig. 2.

trix was imperceptible; the eye was perfectly like the other, and did not present the least deflection; it performed all the movements of elevation, depression, adduction, abduction, and rotation. The eyelids possessed their full mobility, and the puncta lachrymalia acted as in the most perfect health. M. Maisonneuve, in order to show exactly the position of the tumour, has had it drawn surrounded with the maxillary bone. He has also presented it to the Academy, encased in the bones of the head of an adult. It appears a problem how this surgeon could have dislodged such a tumour from such a position.—*Bulletin Général de Thérapeutique*, vol. xlv. 1853, p. 177.

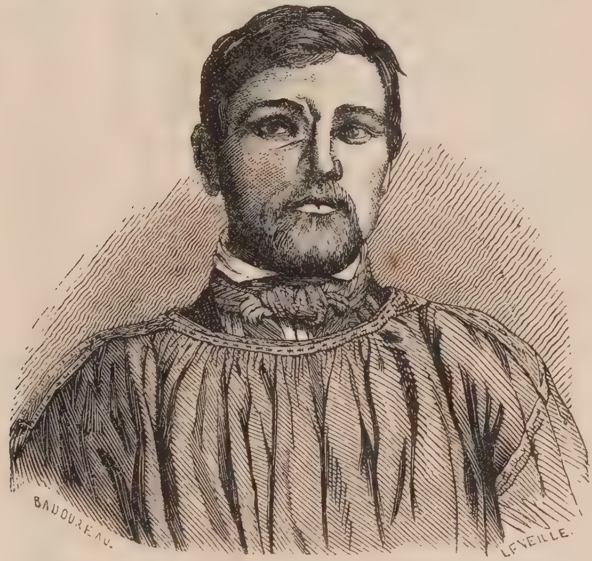


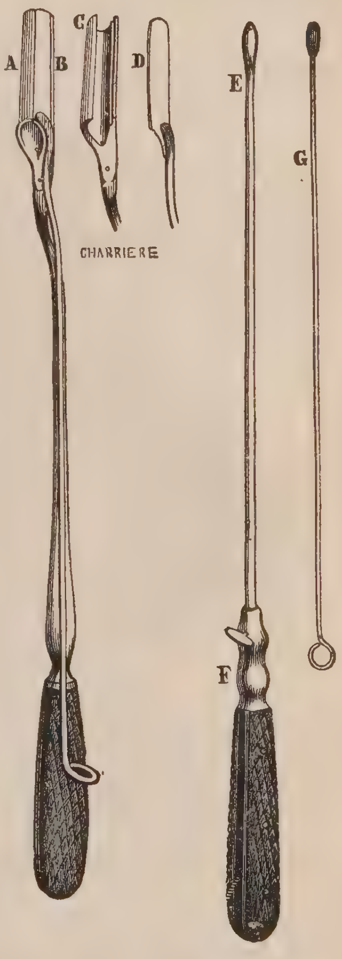
Fig. 3.

II.—*Intra-Uterine Speculum and Stilets for cauterizing the Interior of the Cervix Uteri.*

IN the Number of the Bulletin Thérapeutique for the 15th July, 1853, is reported the history of a patient on whom M. Jobert had performed intra-uterine cauterizations for the cure of an obstinate neuralgia of that organ, complicated with metrorrhagia. The operator, for want of a special instrument, then made use of a probe mandrel, heated to whiteness, introduced through the external orifice of the cervix uteri by means of an ordinary speculum. M. Jobert, reflecting on this case, has since conceived the idea of having a little speculum made which should serve both for exploring the interior of the cavity of the cervix uteri, and conveying to that part the heated iron, or any other local agent, the action of which it should be important to limit, so as to protect the neighbouring sound parts.

This speculum consists of a hollow cylinder A, B, which, when furnished with its stopper G, very well represents an ordinary solid speculum, but reduced to dimensions which admit of its passing through the orifice of the os tincæ, previously exposed in the field of another speculum. In order that it may be easily manœuvred it is furnished with a sufficiently long handle (fig. A, B). This speculum is so divided that it can be at will transformed from a cylinder A, B, into a groove C.

The instrument having been introduced, the movable part of the wall of the cylinder D, which slides in a groove made in the fixed part C, is withdrawn by means of a special handle. The advantage of this division in exploring successively the several portions of the parietes of the cavity of the cervix uteri, in the same manner as we examine the walls of the vagina, by removing one of the valves of a three or four-valved speculum, is easily understood. An olive-shaped cautery, of a diameter corresponding to that of the speculum, may be introduced into the interior of the womb without touching the walls of the cervix when they are to be avoided, or may, at the will of the operator, be made to act only on a given point of these same walls, which is accomplished by taking away the movable blade D, and leaving in the uterus only the groove C.



M. Jobert has twice had occasion to use this instrument. In the two cases, which closely resembled one another, ulcerations existed in the very interior of the cavity of the cervix, with fungous granulations, secreting pus, and giving rise to frequent hemorrhages. In one case a cure was obtained after three cauterizations. The second patient is in progress of recovery.

Finally, M. Jobert has invented a trivalve groove (fig. 2), for the examination and exploration of the os tincæ, and to facilitate the introduction of this little speculum for the cervix uteri. This groove, when closed, is very inconsiderable in thickness, which enables it to be introduced, without difficulty, if presented in the direction of the vulvar opening. When it is in the vagina it is sufficient to approximate the legs A and B, in order to elevate the two lateral valves D and E, which had rested on the posterior valve, with which they articulate by means of a hinge; in consequence of the approximation of the legs A and B, a spring C coming into play keeps the blades elevated: so that with this groove so arranged (fig. 2), the surgeon can, at the same time, examine the cervix uteri, and the entire vesico-vaginal partition, and operate freely on these parts. This instrument is, therefore, specially useful in cases of vesico-vaginal fistula.—*Bulletin Général de Thérapeutique*, vol. xlv., 1853, p. 230.

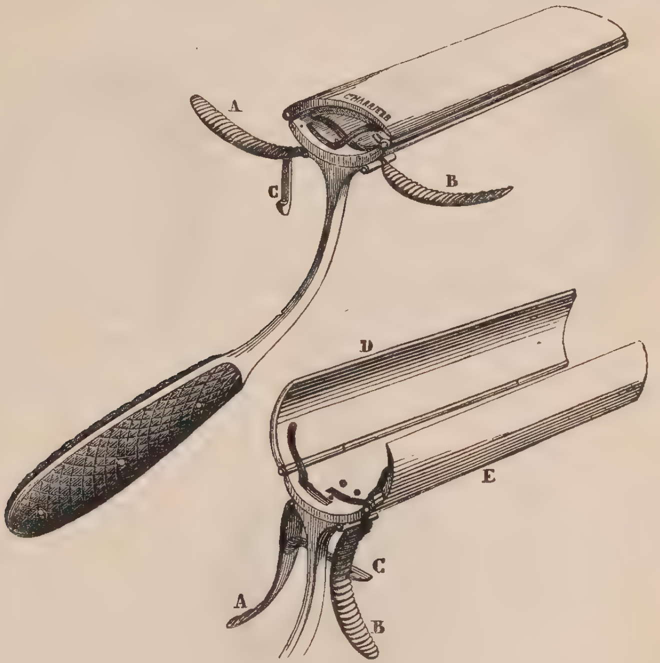


Fig. 2.

III.—*On the Treatment of Hemorrhoids with Vienna Caustic, and the Employment of the Hemorrhoidal Capsule.*

Though we are advocates (observes the Editor of the Bulletin Général de Thérapeutique) for the employment of the actual cautery in the treatment of hemorrhoidal tumours, we think, however, that there are cases in which we may, without inconvenience, have recourse to the use of the Vienna caustic[a]; and we think it may be advantageous to our readers to make them acquainted with an ingenious instrument which M. Jobert de Lamballe has had made by M. Charrière, to render this operation more easy, and to deprive it of any danger to

Fig. 1.

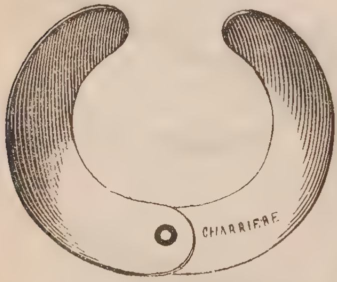


Fig. 2.

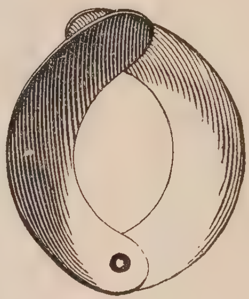
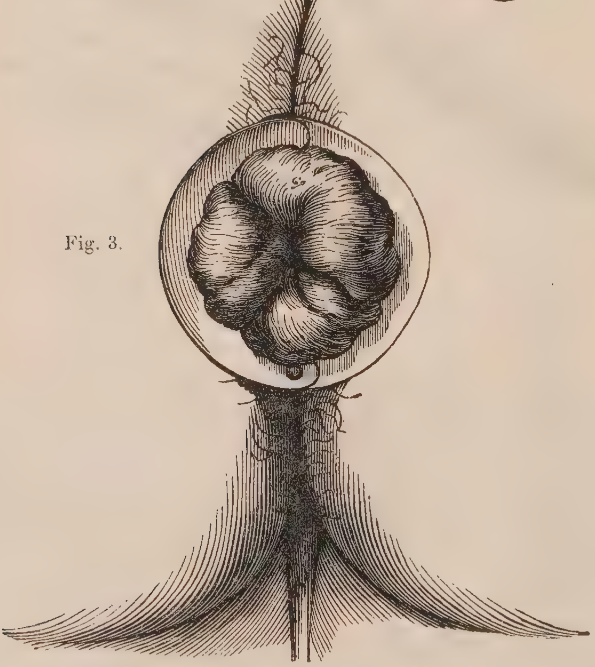


Fig. 3.



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[a] See Neligan on Medicines, 4th edition. 1854.

the patient, and to which he has given the name of hemorrhoidal capsule. By conceiving two blades of silver, or other metal, concave and articulated with each other (fig. 1), so that their concave edges may be approximated, embracing a more or less extended ellipse, we shall have an exact idea of this little instrument, which is as simple as it is ingenious and easily managed. When the instrument is closed, as the two external edges which form the outer circumference are a little elevated, it represents exactly one of the capsules used in chemical laboratories, and the resemblance is still more striking if, instead of examining the instrument by itself, we view it when embracing an hemorrhoidal tumour(fig. 3).

As it is easy to have these instruments of all sizes, and as we can at will increase or diminish the curve formed by the two blades, it is evident that we can apply the capsule to tumours of every magnitude. If we have to operate on one or more hemorrhoids, distinctly isolated from one another, a little capsule, less ellipsoid and almost circular, is pressed successively close round the base of each, and the caustic is applied; the blades of the capsule protect the neighbouring parts, and all the tumours may be thus separately cauterized, either on the same occasion, or at an interval of several days. If the case be one in which there is a tumefied hemorrhoidal circle (bourrelet) which, though distinct at first, has become agglutinated, and forms a single mass, the lobes of which cannot be separated sufficiently to admit of their being attacked one by one, the entire is included in one larger and more elongated capsule, and the whole surface of the tumour is acted on. M. Jobert de Lamballe has recently performed this operation on a man aged 55, who had a prominent tumour of this kind, of a bright red colour, and elevated at least two centimetres and a half (nearly an inch) beyond the margin of the anus, and formed, as is seen in fig. 3, by three tumours which were then adherent to one another, but which must have been originally quite distinct. On the 15th of September, the entire mass having been enclosed at its base between the two blades of an hemorrhoidal capsule, a layer of the Vienna paste was applied over the whole surface, and kept on for four minutes and a half. The caustic having been removed, and the tumour well washed, the surgeon seized each of the blades of the capsule with a forceps in order to separate them from one another. Cold lotions were applied during the following days. From the 16th the tumour was declining and diminished in size; and on the 18th a portion could be removed with the forceps. The cauterization was repeated on the 19th. On the 23rd the eschar was completely detached. A rose-coloured protuberance which existed around the anus was touched on that day, and the next day but one with nitrate of silver. On the 26th the cure was complete.—*Bulletin Général de Thérapeutique*, vol. xlv., 1853, p. 376.

IV.—*On a New Method of Urethrotomy for the Radical Cure of Strictures of the Urethra.* By M. MAISONNEUVE, Surgeon to the Hôpital Cochin.

UNTIL the very recent period when Mr. Syme of Edinburgh, and M. Reybard of Lyons, conceived the happy idea of employing free incisions in the treatment of strictures of the urethra, the radical cure of these affections was considered to be nearly impossible.

Cauterization, on which great hopes had been placed, had not fulfilled the expectations formed respecting it. Scarification, which was, however, considered rather as an adjuvant of dilatation than as a curative method, was attended with only transitory success. Finally, dilatation itself, notwithstanding the many improvements introduced into the modes of effecting it, most frequently succeeded only in palliating the evil, without removing its organic cause.

The treatment of strictures had consequently, in spite of the constant efforts of surgery, made scarcely any progress.

The system of employing free incisions is the only one which includes an idea really containing the elements of success, and which appears likely to attain the end so long sought for.

We can no longer, in fact, call in question the possibility of procuring a permanent enlargement of the urethra, by means of deep incisions made in the indurated tissue of which strictures are formed. The important works of MM. Reybard and Civiale have incontestably established its truth, and the clinical observations which demonstrate it are now numerous enough to admit of every one having witnessed and verified them.

It is then a fact now secured to science that a deep incision, longitudinally made in the canal of the urethra, gives rise to a depressed cicatrix, and that this forms a sort of permanent trench, the width of which augments by so much the dimensions of the canal.

But if this fundamental principle of urethrotomy has received the assent of almost all surgeons, this is by no means the case with the methods and operative proceedings intended to realize its application.

These methods are three in number.

One, called Syme's method, urethrotomy from without inwards, consists in dividing successively with a bistoury the skin, the areolar tissue, and the walls of the urethra, corresponding to the stricture.

The second method, conceived by various surgeons, but applied rather to scarifications than to incisions, is called urethrotomy from before backwards, and is performed with instruments of different forms, the point of which, introduced into the opening of the stricture, serves as conductor to a cutting blade, which springs out in front of the obstacle, and is then pushed against it to divide it.

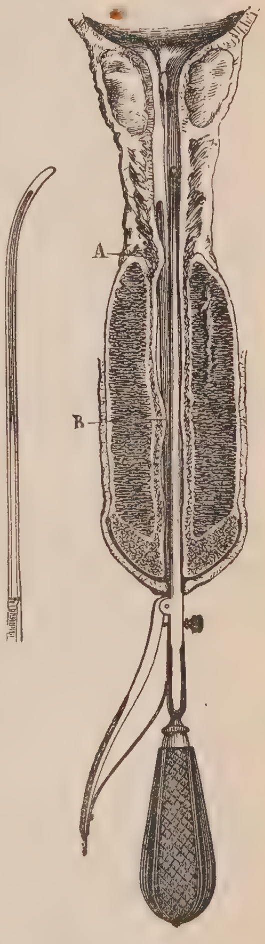
The third plan, invented by M. Reybard, under whose name it is known, consists in dividing from behind forwards the entire thickness of the urethral walls corresponding to the strictured part, by means of an instrument the blade of which, at first concealed, opens when it has passed the obstacle. This blade, thus opened at an obtuse angle, is drawn from behind forward, against the stricture, which it cuts through the entire thickness of the wall of the canal.

Each of these methods certainly fulfils its principal object, namely, the division of the strictured points; but their operative manipulation is usually so delicate and complex, and, above all, the accidents they may involve are so numerous and so serious, that the most experienced practitioners hesitate to adopt them.

The new method I have the honour of submitting to the Academy has the advantage of leading to the same results as the preceding, while it is attended with scarcely any of their inconveniences, and its execution especially is so simple, that it may, in this respect, be reckoned in the category of the most ordinary operations.

This method, which I shall designate by the name of urethrotomy from within outwards, consists in dividing the strictured walls by means of a concealed bistoury, the blade of which, contained in a sheath, is introduced into the opening of the obstacle, where, by a most simple mechanism, it becomes disengaged, presses from within outwards on the stricture, which it tends to dilate, and then on the least traction cuts the affected parts to the depth previously determined on.

Instrument.—The instrument of which I make use (see figure) is not a new instrument. It is known to all practitioners; its mechanism is familiar to them: it is simply the lithotome of frère Côme, To convert it into a urethrotome, I have merely made its blade a little longer and bent on the flat, given its sheath a cylindrical form, especially at its extremity; marked on it the divisions of the mètre, and adopted an accurate regulator, so as to arrange its articulation in such a manner that when required the opening of the blade may be equal in its entire extent.



Description of the Operation.—Preliminary Precautions.—Before performing urethrotomy by my method, the surgeon should gradually bring the urethra to a degree of dilatation sufficient to admit of the urethrotome being easily introduced. He ought especially to accustom the canal to the contact of instruments, in order to avoid the febrile attacks which in this region so frequently complicate even the most simple operations. To this end the patient should, during at least a fortnight, be subjected to progressive dilatation by means of elastic bougies. He should also be kept on light diet, have frequent baths, emollient lavements, and cooling drinks.

This preliminary treatment is not, however, intended merely to accustom the canal to the contact of instruments, and to obtain the amount of dilatation necessary for the introduction of the urethrotome: it is also useful by enabling the surgeon to introduce exploring instruments, and so to ascertain exactly the number of the strictures, their position, extent, degree of resistance, &c.

All these objects having been accomplished, the operation may be proceeded with.

The patient should be placed upon his back, and kept in that position by assistants. It is also advisable that he should be brought under the influence of chloroform. The surgeon, situated at his right side, again explores the urethra with a bougie (à boule); then, seizing the urethrotome, the degree of opening of which has been previously fixed at about 15 millimetres (0·59055 inch), he introduces it as he would an ordinary catheter to 3 centimetres (1·1811 inches) beyond the last stricture, and arranges it so that its concavity shall look upwards. Then, holding the penis on the instrument, he opens the latter by pressing on the lever, and by a movement of traction makes it traverse a space of two centimetres in extent (.7874 inch).

This movement is sufficient to cause the cutting blade to divide all the obstacles which opposed its expansion, without, however, involving the intervening sound parts. The pressure on the lever being then removed, the blade returns into its sheath, and the urethrotome is gently withdrawn.

Mode of Action of the Urethrotome on Strictures.—We have seen that at the moment the surgeon, in the manœuvre I have described, presses on the lever, the blade of the urethrotome driven out of its sheath, at once encounters the obstacle which opposes its separation; then, as soon as a slight degree of traction is given to the instrument, its edge divides the indurated portion without previously injuring the neighbouring sound parts.

This property, possessed by my urethrotome, of not being able to reach the sound tissues until after it has divided the strictured portions, is one of the essential characters of the method, and is not one of its least advantages. It is evident how much security it gives both the practitioner and the patient.

It is particularly in cases in which numerous strictures exist that this property is really valuable. When in fact we have a series of strictures separated by intervals of different lengths, urethrotomy by the ordinary plans is an operation so formidable, that its possibility is scarcely conceivable.

In Syme's method, for example, the surgeon should be obliged, in order to divide all obstacles, to slit the urethra in almost its entire length, and of this its author was so conscious that he confines his operation to those cases in which there is but a single stricture, and where the latter occupies the perineal or membranous portion of the urethra.

The adoption of M. Reybard's mode is not, under the circumstances I have described, productive of much more advantage; for the blade of the instrument having to open behind each stricture, and having necessarily to divide a considerable portion of the sound tissue behind and before the obstacle, it frequently happens that all these incisions united constitute an enormous amount of mutilation, while, in addition, their execution requires a series of long and difficult manœuvres to open and close the instrument.

In my method, on the contrary, whatever be the number and position of the strictures, the surgeon is assured that with a single stroke all that opposes the evolution of the cutting blade shall be divided, while the sound parts cannot possibly be seriously compromised. By it we get rid of the complicated manœuvres and enormous incisions which have justly alarmed practitioners, and have made them shrink from urethrotomy.

Immediately after the incision, the surgeon introduces into the canal a large metallic bougie, five or six millimetres (·19685 or ·23622 inch) in diameter, in order to ascertain that all the obstacles are completely divided. He afterwards replaces this bougie by an elastic catheter of the same size, which is allowed to remain for, at least, twenty-four hours, and, at most, three days. The object of this is to spare the patient the acute pain caused by the urine in passing over the wound, as well as to keep the lips of the incision apart, and to stop the flow of blood.

It is afterwards necessary to continue for about six weeks the daily introduction of a large metallic bougie to maintain the dilatation of the canal.

Accidents consecutive to the operation.—In general the consequences of urethrotomy, performed according to my method, are very simple.

The hemorrhage stops in a few hours. The pain produced by the passage of the urine ceases after the eighth or tenth day, and the suppuration dries up towards the end of the sixth week. But, under some circumstances, we observe accidents of another kind.

1. *Engorgement of the Testicle.*—This scarcely ever occurs except about the eighth day. It is of little consequence, and disappears under the influence of rest and the use of emollient cataplasms. Once, however, I have seen it assume the appearance of a very acute orchitis, which required the employment of incisions and of the repeated application of leeches.

2. *Abscess in the Perineum.*—In the first trials I made of my method, when I performed the incision directly downwards in the median line, I had two cases of urinary abscess, followed by nume-

rous fistulas in the perineum and the scrotum; but since I have adopted the lateral incision, nothing of the kind has occurred.

3. *Urethral Fever.*—Every practitioner knows how frequently catheterism is followed by febrile attacks of the remittent and intermittent types. These affections, sometimes very serious, may appear after urethrotomy, as after any operation performed on the urinary passages. Those I have hitherto seen have not been of any importance; they have merely consisted in a few transient rigors. But the surgeon should not forget that this is one of the most formidable dangers which attend the operation we have been considering; and he ought to take every care to prevent or combat it. Frequent baths, mucilaginous drinks, rest, and, above all, extreme prudence in the use of the catheterism employed to procure dilatation, are the best means of doing so.—*Bulletin Général de Thérapeutique*, vol. xlvi., February, 1854, p. 169.

On the Employment of Terebinthinated Vapour Baths in the Treatment of Chronic Rheumatism, Gout, Stiff Joints, Chronic Catarrhs of the Lungs and Bladder, Amenorrhœa, and Gonorrhœa of long standing. By Dr. ANTONIN CHEVANDIER, of Die (Drôme), with notes by Dr. GIBERT, Physician to the Hôpital St. Louis, Paris.

THE agent to which I wish to draw the serious attention of the profession belongs to the numerous class of stimulants; and so certain and active are its properties that it might almost be said that in it is summed up all excitant medicine. The powers of the remedy have long been established, and none will be surprised at the effects of terebinthinated vapour baths. There is not a practitioner who could not furnish a thousand observations capable of sustaining the reputation of the terebinthaceæ. It would therefore be but a waste of valuable time to display the already long-established claims of resinous bodies to the rank they have obtained in the materia medica. Turpentine, which is probably the most active agent in the aromatic vapour baths, which form the subject of this memoir, has been employed both internally and externally,—in frictions and local fumigations. The other resinous principles which enter with it into the dry vapour in which we immerse our patients have been acknowledged to be worthy of the reputation our predecessors had attached to them.

It is therefore not with a new remedy I am anxious to enrich the materia medica; it is a new mode of administration I wish to bring before the profession, namely, the exhibition of resinous vapour in the form of bath, or rather of general fumigation.

The following is, in a few words, the crude fact which attracted my attention:—

As I have stated in a former publication, the peasants of our mountains have long been accustomed to meet around the furnaces in which black pitch is distilled. It was some moments after the chips of pine had been arranged at the bottom of the furnace, previously heated for forty-eight hours, when the temperature is sufficient to melt the resin solidified in the air, that they descended into this *infernal* medium. They took the precaution of enveloping themselves in thick woollen blankets, as a protection against the excessive heat. At the end of ten, twelve, fifteen or even twenty minutes, they came out of this bath deluged in perspiration, lay down subsequently in badly closed huts, and returned to their homes delivered in a few days from pains of very long standing, or from very serious articular rigidities.

These immersions, of which I wished to be a witness, took place each year, during about two months, at a height of upwards of 6500 feet above the level of the sea, in a climate where the snow is absent only for a few days.

Patients courageous enough to employ this method have assured me that they always found it agree with them. When positive and numerous facts caused me to reflect on the happy application which might be made of this general fumigation to a large number of diseases, I perceived that it was necessary to remove the danger of such unfavourable external circumstances, and to render the administration of the baths more easy. I lost no time in recommending the provisional construction in the village itself of a furnace, similarly circumstanced to that in the mountain. It is a little more than six and a half feet in depth, three and a quarter at the opening, and six and a half in its mean diameter; it is oviform, and has at the bottom a very narrow tube through which the melted resin flows into a reservoir placed externally. Chips of the same wood were used in feeding it in my experiments: thus preserving all the elements which appeared to me indispensable, and removing those which could be only dangerous. I devoted two months to the accurate observation of the physiological and therapeutical effects of baths of terebinthinated vapour, at a high temperature.

The patients who had taken several baths on the mountain descended the first, encouraged those who had not done so, and by their easy resistance of heat justified me in establishing a mean temperature of 70° R. (189°·6 F.), much lower than that which some had been subjected to on the mountain.

It will at first view be thought surprising that a man can remain without danger in the midst of so elevated a temperature, saturated with exciting aromatic vapours disengaged from resin in a state of fusion[a]. It should be observed that the patients seated round the furnace, protected by their blankets from the heat radiating from the walls to which they turn their backs, have their heads in the centre, where a current of cold air rushes in. The thermometer, placed at the foot of this descending column, marks even there 55° R. (155°·75 F.). Thus situated, some patients have remained for more than half an hour without experiencing any serious inconvenience. Violent excitement of the circulation, some difficulty of breathing, stinging heat of the skin, or commencing determination to the head, induced them to withdraw.

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[a] In the fumigations in the Hôpital St. Louis, where only the body of the patient is immersed in the apparatus, the head remaining outside, the temperature is raised but little above 48° R. (140° F.); and in the vapour baths, where the patients are

In order to test in my own person the physiological effects of the bath of terebinthinated vapour, but above all with the view of ascertaining the dangers to which patients might be exposed during their immersion, I was anxious to descend into the furnace, having provided myself with a spirit thermometer to examine the temperature of the furnace in its several points, and sheltered under an immense blanket which descended from the head over the shoulders and down to the feet, under which I almost entirely disappeared, I squatted down on the chips from which the bubbling resin was escaping; I wore no other clothes than a large pair of pantaloons and cloth waistcoat: the thermometer placed behind my back, and consequently exposed to the heat radiating from the walls of the furnace, indicated at the end of ten minutes 82° R. (216°·5 F.), and remained at that point as long as the bath lasted; when held between my knees it fell to 68° R. (185° F.), and even to 60° R. (167° F.) at the foot of the descending column of cold air to which my head was exposed. On entering the furnace I felt almost suffocated so long as I remained standing, but once seated on a wooden bench arranged for that purpose, I was no longer uncomfortable. It was exactly 7 o'clock. My pulse, at the period of immersion, beat 65 in the minute. For ten minutes I conversed with my neighbour, asking him how he felt, and telling him that I was not at all incommoded. However, I took the precaution of holding a handkerchief steeped in cold water on my lips and forehead to cool the air I breathed.

The resinous vapours, which were disengaged in the form of a light transparent smoke, far from causing suffocation or disagreeable burning in the throat, gave rise, on the contrary, to a pleasant and soothing sensation; an almost imperceptible tingling was produced in the skin, which became the principal seat of congestion; it was very hot, very red, and was covered with perspiration. The arterial circulation was accelerated, the pulse was developed, hard and full, and beat 88 in the minute; the pulsations of the heart were not troublesome; the head was free, burning; the face was very animated; there was no dulness nor nausea; even the conjunc-

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completely submerged in the atmosphere of vapour, the highest temperature does not go beyond 32° or 33° R. (104° to 106°·25 F.), which temperature even is borne with difficulty.—G.

tiva was not irritated. I was streaming with perspiration, and yet had not experienced the weariness which precedes or accompanies that produced by ordinary means. At the end of twenty-five minutes, the respiration becoming more rapid, the determination to the head more decided, and the internal heat insupportable, I came out of the furnace[a]; I ran to my room, which was only a few steps distant; my step was firm; I threw myself into a well-warmed bed, keeping on my clothes and my burning blanket, which was a litle injured. The pulse soon rose to 95; the determination to the head became more decided; the beating of the heart caused the chest to heave violently. After some minutes all these symptoms abated; the pulse fell to 80; the palpitations ceased; perspiration set in so profusely as to penetrate the mattrass. I had taken an hour's repose, when, after having had myself wiped with flannel, I got up, put on warm clothes, and returned to my patients.

I had an extraordinary suppleness in my limbs, and experienced surprising agility; I did not feel weakened; I ate with more appetite than usual; at night my sleep was disturbed by dreams, in which hyper-excitement of the genital organs was not idle. The urine was highly coloured, and had a decided violet odour, but presented no sediment. I have since several times used the bath, which has never fatigued me.

160 patients descended into the furnace in the space of two months: every age, from 16 to 75; every species of temperament, from the rachitic to the apoplectic, have been subjected to the action of the resinous vapours, at the average temperature of 65° R. (178°·25 F.); two persons only were obliged to leave the furnace: one an old man of 64, overcome by the heat at the margin of the lower part, was seized with a fainting fit, which soon went off in the open air; the other, after an immersion of sixteen minutes, having returned by himself to bed, laboured for some minutes under a gentle delirium, with tendency to sleep. A few cold applications quickly dispersed these symptoms. These two patients have subsequently had recourse to the baths without inconvenience. In others I have observed, in a more or less intense degree, all the physiological effects which were produced in myself, and which I have above described. A great number suffered from ardor urinæ; sleep is in general interrupted by starting, and disturbed by erotic

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[a] Even the sojourn of twenty-five minutes is long. In the Hôpital St. Louis the patients scarcely remain twenty minutes in the fumigatory boxes, and from ten minutes to a quarter of an hour in the vapour-bath, properly so called. It is, moreover very remarkable that some hemiplegic persons may be subjected, without danger, to this treatment, the good effects of which have been confirmed by long experience.

However, I am far from regarding it as entirely innocuous. It has happened, although indeed rarely, that in the bath or on coming out of it, a paralytic patient has been stricken with a fresh attack of apoplexy, which has proved fatal. It is therefore only with proper caution that this remedy should be permitted in such a case. —G.

dreams. In several the excessive perspirations were followed by transient miliary eruption, which have in no instance produced an amount of weakness proportioned to the loss the patients suffered by the skin.

Twelve baths, taken in two series, with an interval of eight days' interruption, constituted the treatment of the season[a].

I say nothing as yet of the therapeutic effects which numerous observations, collected daily and carefully noted, will soon bring before the reader.

Without waiting for the voice of experience, which concedes a great value to this therapeutic means, what are we to think, *à priori*, of the possible advantages of its application to medicine? Its physiological effects, the general hyper-excitement produced by baths of terebinthinated vapour, warrant us in affirming that their employment will be almost coextensive with excitant medicine itself; and that, moreover, the special action of resinous bodies on the mucous membranes causes this method to be doubly indicated in chronic diseases of the skin, in chronic catarrhal affections of the chest or bladder, and, above all, in chronic rheumatism, gout, gonorrhœa of long standing, amenorrhœa, &c.

My anticipations are justified by the ordinary success of rational medicine in the great class of diseases which Hufeland calls *rheumatosis*,—in all cases of disease requiring the employment of resinous bodies, the terebinthaceæ, tar, benzoin, &c. In fact, the vapours which I have called terebinthinated would deserve a name of a more extensive application, for it is not only turpentine, but also all the volatile principles of the resins, which are resolved into vapour.

The tree from which black pitch is extracted occupies the elevated table lands of some of our mountains. It pretty closely resembles the *Pinus pinea*, from which it differs in the elevated situations it inhabits; it is also distinguished from the latter species by the comparative smallness of its fruit. This pine is very rich in resin. In the month of May a long piece of the bark is removed by the stroke of a hatchet, and the wood is left thus exposed. The resin which exudes hardens in the air, and is found at the end of a fortnight in a layer of greater or less thickness, which is removed by a second stroke with the portion of wood it covers, and this constitutes the chip. The solidified resin is met with in the form of yellowish-white opaque masses, of the consistence of wax, the taste of which is at first sweet and agreeable, but afterwards acid and bitter. It is the turpentine derived from a pine from which the essential oil has not been previously extracted.

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[a] In the external practice of the Hôpital St. Louis, the rheumatic patients use and abuse the vapour bath. There are individuals who have, without any inconvenience, taken consecutively 100 baths and more, with only a day's interval between each bath.—G.

CASES.

The results detailed in the earlier cases were obtained at an elevation of nearly 6000 feet, in the furnaces used in the distillation of pitch. They are the more surprising, as the patients, on leaving a temperature of 80° R. (212° F.), were obliged to traverse an atmosphere at about 8° (40° F.), in order to reach their huts, which were but imperfectly closed against the weather.

Case I.—M. Gautier, Mayor of the commune of Châtillon, had an attack of acute rheumatism, which was treated judiciously, but left behind it deep-seated pains, often penetrating into all the joints. He had passed three seasons at the waters of Aix-en-Savoie. He returned relieved for a time, but never cured. Walking was difficult and distressing, and standing painful. Resolutely determined, as he said, to have done with it, he had himself conveyed to the mountain. After four baths he thought he was cured, and descended on foot, and in this way made a journey of four leagues. During the entire of the next year he had only vague reminiscences of his malady. The following season he reascended the mountain, and five times immersed himself in the pitch furnace. He returned so completely cured, that he has not felt a rheumatic pain for six years. M. Gautier is 44 years of age, and is of a sanguineous temperament. His restoration caused the more surprise, as he had been looked on as permanently crippled.

Case II.—M. Faure, a merchant tailor in Paris, aged 34, had been for three years affected with rheumatic gout; he was forbidden to work, and could only walk with the assistance of two crutches. He resolved to come and submit to the remedy he had heard extolled. This young man had all his joints anchylosed; he was bent like an old person, and I feared he would sink during his stay on the mountain. He surprised every one; in a fortnight after, he returned on foot, alone. He had taken thirteen baths in fifteen days; during all that time he drank wine, ate salt meat, and imbibed a great quantity of resin: he returned to Paris in good health. During the following year he had a single attack of rheumatism, which lasted for only a few days. Last year he returned rather through gratitude than necessity; he enjoys perfect health, manifested by a firm step and bold gait; he is, in fact, no longer the same man.

Case III.—Anthony Roux, a mason at Châtillon (Drôme), was 27 years old when he was attacked with general acute rheumatism. For three years he suffered from such violent pains that he was unable to follow any kind of work. His motions were so much restricted as to give all his joints the appearance of being anchylosed. He daily grew weaker and weaker, and became the victim of the restlessness of despair. The least pressure over the spine or clavicles produced excruciating pains; he coughed much, and expectorated copiously. He was considered to be in phthisis. He resolved to try the pitch furnace. He took five baths of fifteen minutes each, wetting afterwards thirty-seven shirts with perspiration. Before the fourth bath, a miliary eruption took place over the entire body, his figure filled up, and his movements were freer and less painful. In a word, there was a remarkable improvement. In 1848 he took five baths more, and thought himself cured; he descended the mountain on foot. In 1849 he again had recourse to the remedy which had been so useful to him. After having taken six baths in eight days, he returned perfectly cured. From that time he resumed his occupation of mason, in which he has not been since interrupted by any attack of rheumatic pain.

Case IV.—M. Mathieu Brès, of Puy-de-Dôme, aged 32, of a sanguineous temperament, after a sporting excursion in a marsh, was seized, thirteen years ago, with an attack of sciatica, extending the entire length of the right limb. There was no treatment which he did not try. The waters of Aix, those of Mont-Dore, which he frequented for four years, scarcely alleviated his sufferings. Last year he took seven baths of terebinthinated vapour. The pain was dissipated, and scarcely returned during a few days in winter. This year he took eight baths, in which he remained for half an hour without pain. He asserts that he is radically cured, which is confirmed by his bold and rapid step.

Case V.—Mademoiselle Maria Ginon, aged 17, of a delicate constitution and nervous temperament, was attacked about a year ago, after bathing in the Rhone, with pains which engaged all her joints. A rational treatment and ordinary vapour baths produced a little amelioration. However, from this time the movements of the arms and legs were limited and painful; she could bring her hands neither behind her back nor over her head, and each attempt she made was arrested by piercing pains. The muscles of the neck were sore to the touch, and the restrictions which they imposed upon the motions of the head were very painful. On the 15th of July a bath at 70° (189°·5 F.) was very well borne for fifteen minutes, and was followed by very copious perspiration during an hour; the night was good. The next day, contrary to what was usual, she rose without pain. On the 16th she took a bath for twelve minutes at 75° (200°·75 F.); the night and day were disturbed with some attacks of pain. On the 17th a bath for fifteen minutes at 60° (167° F.). On the 18th a bath of sixteen minutes. On the 19th, after a bath of eighteen minutes at the same temperature, the pains had almost entirely disappeared. On the 21st and 22nd a bath of fifteen minutes completely dissipated the pains. Mademoiselle Ginon could now hook her gown and tie up her hair. I recommended her a week's rest. She then returned to finish the treatment with the twelfth bath. I had occasion to see her a few days ago, when she was entirely free from her rheumatism.

Case VI.—Anne Laget, a stone-cutter at Die, aged 49, and of a sanguineous temperament, was attacked three months ago with sciatica in the right leg, which condemns her to remain stationary by day, and to want of sleep at night. Walking is very painful, and this woman, though accustomed to such severe labour, cannot lift the smallest burden. The foot of the affected side is constantly cold, and no sooner does cold water touch it than a violent pain shoots to the loins, following the course of the sciatic nerve, on which even moderate pressure is borne with difficulty. On the 12th of July she remained twenty minutes in a bath at 57° (160°·25 F.). The next day the pain was less intense. On the 13th she had a bath at 65° (178°·25 F.); the night was good. On the 14th, after a bath at 70° (189°·5 F.), kept up for twenty-five minutes, the patient felt perfectly well. Thinking herself cured, she resumed all her household occupations. She made a collection of clothes which she was going to wash, carrying baskets full of linen herself. The contact of the water renewed her sufferings, but a bath which she took on the 21st dispersed the pain, which the wet weather of the next day did not reproduce. On the 17th of August I called on her to satisfy myself as to her cure: the pains had not reappeared, and she had resumed all her usual occupations. The cure was permanent.

Case VII.—M. Amédée Reboul, a young man of a weakly constitution, was attacked about ten months ago with subacute arthritis of the right knee, which rendered a very energetic treatment necessary. At the end of two months the joint was still the seat of a very considerable effusion. The patient experienced pain when he endeavoured to force the very limited motions of extension or flexion; he could not support himself upon this leg. On the 15th of July a bath at 70° (189°·5 F.) was borne for ten minutes; the next day the knee was weaker. On the 19th a second bath produced a very good effect. On the 22nd, after a third bath, the knee regained its normal dimensions and the full extent of its natural movements. M. Reboul can, without inconvenience, rest on the affected leg; he can walk without pain, and is completely cured. This patient, whom I meet daily, has not merely regained the complete use of the joint, but has attained a state of general health to which he had been previously a stranger.

Case VIII.—M. Charignon Joseph, of Valence, aged 34, of a nervous temperament, and of a constitution much weakened by long suffering, informs me that, four years ago, in consequence of the suppression of the perspiration of the feet, he was seized with a violent headach. This cephalalgia was treated with some success by the frequent administration of purgatives, and the repeated application of leeches to the anus. The use of an Indian rubber stocking restored the perspiration of the feet. The headach had scarcely yielded to the foregoing treatment, when the throat became covered with deep ulcerations; the shoulder and right arm were seized with acute pain, and the arm became powerless, and apparently paralyzed. Twenty days after the attack the pain left the upper extremity, which quickly regained its strength, and was transferred to the loins, whence it extended to the external malleolus of the left leg. The ulcerations of the throat, which had resisted all treatment, spontaneously healed. The patient derived benefit from the waters of Saint George (Ardèche). He was recommended cold baths. After the third bath, the left knee became the seat of a very violent and very serious inflammation, which kept him six months in bed. At present all the joints are almost anchylosed; the left knee, which bears the marks of two flying cauteries, is more voluminous than the other; its motions are very imperfect; the head of the tibia is swollen. There is constant lameness, and the patient, who is, notwithstanding, of an active disposition, walks with extreme difficulty. It was with some apprehension that I saw this man descend into the bath. The other patients were all alarmed at his state. On the 14th he remained for twenty-five minutes in the furnace, heated to 70° R. (189°·5 F.). On the 15th he was restricted to fifteen minutes. These first trials were followed by agitation and startings, which disappeared during the day. The baths of the 16th and 17th soothed the patient, who, on the 18th and 19th, went down into the furnace singing, and announcing to all a decided improvement: the nocturnal pains had not returned. Eight days' rest was now taken; on his return he was going on well; he had held the ground he had gained, could walk without the assistance of his cane, which he previously required to move a step. The left knee was capable of supporting the weight of the body; all the other joints were free. He surprised all who witnessed the commencement of the treatment. On the 28th, 29th, and following days, he took six baths to confirm this improvement, which was so great that it might almost be called a cure. This patient, whom I have seen a few days ago, is in a very satisfactory state.

Case IX.—Madame Landru de Lue, aged 49, of a nervous temperament, had been for many years affected with general chronic rheumatism, which scarcely left her the power of attending to a few household occupations. Standing was painful, and walking difficult. The waters of Aix in Savoy and of Lamotte produced some good effects, which were, however, only temporary. The 22nd of August, 1851, Madame Landru remained twelve minutes in a bath of terebinthinated vapour at 70° (189°·5 F.). The 23rd, 24th, 25th, and 26th of the same month she continued these baths, and by degrees attained remaining in them for twenty-five minutes. The perspirations were not very great. After eight days' rest Madame Landru commenced a new course of baths, which produced abundant perspirations. The improvement was very perceptible, the pains were dissipated, the movements became freer, and the patient was able to walk nearly four English miles without fatigue. Intolerable itching behind the shoulders, from which she had suffered for six months, entirely ceased. This lady, whom I frequently see, has had no relapse of the habitual pains, but the joints have again acquired some rigidity.

Case X.—M. Mazouiller de Montvandre, aged 57, of a nervous temperament, has for eleven years been unable to walk without the assistance of two crutches. He had for ten years pains in the stomach, which ceased suddenly, and were immediately succeeded by very acute inflammation of the hip joint of the left side. Abscesses formed, and the head of the femur was dislocated from its cavity. Subsequently to this spontaneous luxation, the limb underwent a considerable shortening. Having been seized with general subacute rheumatism, he repaired, in 1840 and 1842, to the waters of Lamotte. In 1841 he visited the waters of Aix, which procured him some relief, as did those of Saint-Laurent, which he has since, during two years, frequented. At present the arms are capable only of very imperfect and very painful motions; the articulations of the legs seem no longer to enjoy any flexibility; the loins are the seat of continual acute pains. This patient took eight baths consecutively, remaining in them twenty-five minutes at 75° R. (200°·75 F.). He perspired enormously. After his sixth bath he presented himself boldly to me, walking with a single crutch, which he had not done for eleven years. He soon left me with thanks, for having enabled him "to sow his field and dig his vineyard," suiting the action to the words. His arms had recovered their powers of motion and lost their pains; the pain of the loins had also disappeared.

Case XI.—M. Garaix d'Etoile (Drôme), aged 63, of an *apoplectic* tendency, has been for fifteen years affected with chronic rheumatism. His knees are painful and stiff; the right shoulder-joint is so limited in its movements that the patient cannot raise his hand to his head; even when his fingers are extended, he can scarcely touch the wide brim of his hat; he requires assistance in taking off his coat. The scapula is involved in the motions of the humerus; there is false anchylosis. On the 3rd of August I thought it advisable to bleed him before sending him into the bath. After his first set, which he bore without the least inconvenience, he could squat down with ease; the knees regained their natural flexibility; and he was rejoiced at being able to take off his hat without assistance, and to join his hands behind his back, which he could not have done for four years. He applauds his cure by clapping his hands above his head. The waters of Aix had been inefficacious.

Case XII.—The surprising effects which the bath of terebinthinated vapour had produced under my direction justified me in inducing M. Pignet de Montboucher to have recourse to it. This patient, aged 40, of a nervous and bilious temperament, was for twelve years affected with an inflammation of the scapulo-humeral articulation of the right side, which ended in suppuration. The abscesses by which the pus gained exit were of two years' standing. The limb was much emaciated. The deltoid and great pectoral muscles were reduced to a mere shred. The thermal waters of Saint-Laurent had proved injurious. The least pressure on the parts surrounding the articulation caused acute pain. The joint was incapable of motion. When the arm was raised it could be carried forward or backward only by drawing the scapula with the humerus. A slight crepitation was heard in the shoulder. The severity of these antecedents left me nothing to hope. The first bath excited intense pains, which lasted all night, and were accompanied by some nervous startings. After the first set pressure was no longer painful, and I could produce some movements in the joint. The patient took ten days' rest. After the second set he was able to make tolerably extensive motions without assistance; he could raise the arm above the horizontal line; he could take aim with his gun, and bear the recoil without suffering. The muscles had revived and were filling up; the scapula still participated in the movements; but the anchylosis was nearly removed. The accounts I have since had of this patient are most favourable.

A young woman, who presented herself with symptoms nearly similar in the shoulder, but in whom there had been no suppuration, at first felt great benefit from the use of the baths. The pains soon returned; and this patient, of whom I had lost sight for six months, came back to me with an enormous accumulation of pus in the joint.

CASE XIII.—M. Cier de Valence was attacked in the month of March, 1851, with a sudden chill, which occasioned a violent cold and lumbago. The knees, like the loins, became the seat of acute pains, which were dissipated by the application of flying blisters. In the month of August this patient, aged 48, of a sanguineo-bilious temperament, presented himself with lumbar pains which had resisted all treatment. He was prevented stooping forward, as well by the lumbago as by the rigidity of the articulations of the thigh. Three baths were followed by a cure as complete as it was rapid.

CASE XIV.—M. Blâche d'Etoile, a young man of a lymphatic temperament, was in a state of general glandular engorgement; one of the cervical glands had long suppurated. The left shoulder was the seat of dull and deep pains; the movements of the joint were very limited. After four baths the pains ceased, the arm regained the full extent of its motions, and the glands diminished considerably. This patient, to my great regret, would not continue a treatment, the effects of which, on the glandular system, I was curious to ascertain more precisely.

CASE XV.—M. Bergeon, of Paris, aged 24, of a sanguineous temperament, was attacked, six months ago, with rheumatism affecting the knees, and was treated with some success with sulphate of quina. However, the left heel, which was still swollen, was the seat of an acute pain, against which all treatment had failed. After six baths the patient, who walked with much difficulty, went a long distance on the mountain over stony paths. He was not fatigued by it, and travelled the day he left between fifteen and sixteen English miles on foot. The pain had ceased, the congestion was dispersed. A gonorrhea, under which this young man had laboured for six months, and which had resisted a variety of injections, was radically cured after the third bath.

CASE XVI.—M. Carène, a plasterer at Miremande, aged 41, of a lymphatic and nervous temperament, was attacked about four months ago with general acute articular pains. The thermal waters of Saint-Laurent did not produce any good effect. He presented himself in the following state: considerable emaciation, extreme weakness, scarcely any power of moving his head, very acute pains in the entire extent of the right sciatic nerve. He could only walk with the aid of crutches. The condyles of the femur and the head of the left tibia were much enlarged, the joint being very nearly fifteen inches in circumference. After six baths the pains had entirely ceased, motions of the limb were practicable, the bony tumours had considerably diminished, and the circumference of the articulation was not quite thirteen English inches. This patient was obliged to suspend the treatment from debility.

CASE XVII.—M. Algond, collector at Montmeyraca, aged 43, of a sanguineous temperament, was attacked eighteen years ago with a catarrh of the chest. Every morning on awaking he was seized with a very violent cough, attended with the expectoration of mucous sputa. Auscultation did not present any thing particular, except a slight mucous râle in the upper part of the lungs. M. Algond took eight baths of half an hour each. He assured me on leaving that he felt cured. The sputa were less abundant, and the cough had almost entirely disappeared. It was not without surprise that I learned that a catarrh of so long standing had almost completely yielded to the baths of terebinthinated vapour.

I think it advisable to close the recital of cases here. I might still bring forward some examples of amenorrhœa cured by the same plan, but the limit I have assigned myself obliges me to conclude this memoir.

In my opinion the baths of terebinthinated vapour appear to possess a stimulant action, which may be employed beneficially in many chronic diseases already named. The effects they have produced in chronic rheumatism and rheumatic gout are among the most rapid; and I have verified cures which may be truly called radical.

Resinous bodies have, so to speak, a specific action on chronic diseases of the skin, affections of the mucous membranes, and on rheumatic ailments. The vapour bath is the form which is best adapted to their administration.

Baths of terebinthinated vapour are easily borne by individuals of every temperament, even at a mean heat of 75° R. (200°·75 F.). They always produce an acceleration of the pulse and a most copious perspiration, occasionally accompanied by an eruption which is sometimes papular, sometimes miliary, and is followed by intense pruritus. The urine has almost invariably a violet odour, and its passage is occasionally attended with pain. The absorption of the resinous vapour produces a marked excitement of the genito-urinary organs.

The absorption of some particles of crude resin has always had a beneficially stimulating effect on sluggish bowels. In females the reappearance of the menses has invariably been hastened by seven or eight days after the terebinthinated baths; some in whom they had not returned, even in eighteen months after delivery, have menstruated after a few baths.

Two very chronic and obstinate gonorrhœas disappeared after the third bath. The first augmented the running, and caused pain in urinating.

Most chronic rheumatic affections, anchyloses, stiff joints, and chronic arthritis, have been radically cured or beneficially modified.

Sciatica has always yielded to a few baths. Two cases only proved obstinate. If the affection retain any decidedly inflammatory character, the ordinary antiphlogistics must be had recourse to before commencing the use of the baths.

I think it necessary that the patient's head should be immersed in the resinous atmosphere, in order that he may both inspire the stimulant, and avoid the dangers of cerebral congestion. This at first view seems strange, nevertheless experience has confirmed this paradox. Congestion takes place in the skin especially at the expense of the internal organs.

I have thought of having fumigating chambers constructed, in which patients who do not require to be submitted to a high temperature might with greater ease inspire the aromatic vapours.

It is evident that the high temperature in which the patients are immersed singularly favours the stimulating and eliminating action of the remedy.

The contra-indications are easily anticipated. Persons in whom hemorrhages are frequent, or in whom a previous metastasis of rheumatism to the heart has produced an organic affection of that organ, or those who are subject to violent palpitations, could not, without danger, be subjected to this mode of treatment. But debility is not a contra-indication.

I place my observations and views before the profession with confidence; all their merit proceeds from this, that the former have been collected and reported with fidelity, and that the latter are the most natural interpretations of numerous and varied facts. As to the indications I have drawn from my first successes in the treatment of certain obstinate chronic diseases, they contain nothing that may not be easily applied in practice.

My future efforts must be directed to the means of introducing into the ordinary practice of medicine, by the invention of suitable fumigating apparatus, the bath of terebinthinated vapour, which has still all the simplicity of novelty, but also all the claims of a method which bids fair to have some place in the future of the history of medicine[a].

I have adopted some modifications in the mode of administration described above. The patients submitted to recent experiments have taken their fumigations in a fumigating chamber, the temperature of which can, by means of a stove, be raised to 80° C. (177 F.) Through a very simple mechanical contrivance, within reach of the hand, the patient can raise or lower the degree of heat, and bring into the chamber a greater or less quantity of resinous vapour.

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[a] The author, faithful to his promise, having continued his experiments, has subsequently transmitted to us new observations, which we shall not add to the foregoing. We think it better to confine ourselves to the novel remarks and to the conclusions which terminate this essay.—G.

The numerous observations I have collected are sufficient to establish the efficacy of the baths of resinous vapour in sciatica, rheumatism, and certain secondary syphilitic affections, and to justify the extension of their employment to the treatment of chronic affections of the mucous membranes. I am persuaded that certain cutaneous diseases might be submitted, with some hope of success, to these fumigations.

To put medicine fully in possession of so powerful a remedy, we must facilitate its application. A fumigating box heated by means of a spirit lamp with an ample wick, over which is suspended a tin cup filled with chips of resinous wood, constitutes an apparatus I have sometimes made use of, and with which my colleague Dr. Gilbert has obtained surprisingly successful results: it appears to me that a tube dipping into the vapour and rising to the height of the patient's mouth, and thus enabling him to respire the resinous aroma, would be a necessary appendage.

The chip is obtained by making a large gash in the tree, in which the resin concretes in flakes as transparent as varnish, and is removed after four months' exposure to the air. The *Pinus sylvestris* and *Pinus maritimus* are sufficiently rich in resin to serve for important experiments.

From the preceding observations I am induced to infer:—

1. That rheumatism is a general affection dependent on a particular humoral defect, the existence of which is due to an alteration of the functions of the skin; and that it is hereditary.
2. That the antiphlogistic system of treatment, though useful in the commencement, is insufficient, and may be injurious after the first period, called the inflammatory stage.
3. That we must attack rheumatism in its cause, the impairment and irregularity of the functions of the skin, and in the defect which constitutes it, by annihilating it by the employment of a specific, by eliminating it by a powerful depurative, and by strengthening the cutaneous organs.
4. That the bath of terebinthinated vapour is the most suitable and most powerful means of obtaining this result.
5. That it is of importance to make use of wood rich in resin.
6. That patients can, without much inconvenience, remain for half an hour in a medium saturated with resinous vapour, at a temperature of 60° and even 90° C. (140° and 194° F.).
7. That an average of twelve or fifteen baths has sufficed to cure cases of rheumatism and of catarrh of very long standing.
8. That it is of great importance that the patient should inspire the aromatic vapour.
9. That chronic rheumatism, gout, and obstinate catarrhal affections, are rapidly modified and cured by baths of terebinthinated vapour.

10. That this powerful remedy is destined to assume an important rank in therapeutics.

I shall be happy if practitioners, in according a favourable reception to my essay, will allow me some credit for having directed attention to a therapeutic agent hitherto overlooked, and for having extended its application not only to rheumatism, but to many other affections of the system, while I have also endeavoured to explain its action.

There are already ten establishments of baths of terebinthinated vapour frequented by patients in the departments of Drôme and Isère. It is in that under my direction at Die that the cures reported above have taken place.—*La Revue Médicale Française et Étrangère*, June 15, 1854, p. 642.

Practical Observations on the Ointment and Tincture of Cucumbers. By M. Emile Mouchon, Pharmacien at Lyons.

M. Buron has effected a great improvement in preparing cucumber ointment, and rendered a real service to pharmacy by introducing the use of the tincture of cucumbers, the process for which he has originated. His ointment into which this useful product enters is prepared in a manner as simple as it is easy. It possesses indeed some advantages, but is not what it ought to be when compared with what is procured from Paris; it is far from presenting in the same degree the perfect whiteness, the aroma, and lightness, which characterize the Parisian preparation.

Starting from the same basis as M. Buron, that is, replacing the juice by the tincture, we may arrive at the formation of an ointment of as good quality, almost as white, as light, more agreeably aromatic, and keeping better, than that which the Parisians have so well taught us to appreciate.

To give the ointment all these qualities combined, we should proceed in the following manner, both in the preparation of the tincture, and in that of the ointment itself:—*Tincture of Cucumbers*,—Take of cucumbers of medium size, 514 ounces; rectified spirit, at 36° (sp. gr. 837), 32 ounces; reduce the cucumbers to a pulp without cutting off any part; incorporate the spirit with the mass; place the entire on the diaphragm of a still, lute the apparatus, and at the end of twenty-four hours distil 32 ounces of tincture at 19° of the areometer (sp. gr. 935).

Although I use the spirit in a proportion nearly double that which M. Buron prescribes, the tincture is as strongly aromatic as his, the standard of which does not reach 14° (sp. gr. 973). This difference of density depends, on the one hand, on the relative proportion of the cucumbers and the alcohol; on the other, on the employment of a stronger menstruum than is ordinarily made use of, 36° (sp. gr. 837), instead of 34° (sp. gr. 847).

The 32 ounces of alcoholic product, containing only a part of the alcohol employed, and the cucumbers not yielding all their aroma to it, we may with advantage continue the distillation so as to collect an additional 32 ounces of alcoholic liquor at 16° (sp. gr. 955), tolerably aromatic, and very fit for ulterior use, especially after rectification in the water-bath. It is easy to understand, in fact, that not only do we thereby obtain a considerable quantity of liquid, which it would be a loss to leave in the residuum of the distillation, but also that the employment of this second product may advantageously replace that of alcohol in proceeding to a fresh preparation of the tincture, the aroma it possesses enabling it to gain an additional quality to what is produced thereby.

Pomade of Cucumbers.—Take of benzoinated officinal lard[a], 375 parts; stearine, 125 parts; tincture of cucumbers, 60 parts. Divide the stearine into small portions, melt in the water-bath with the benzoinated lard; pour the fused mass into a large marble or polished stone mortar; beat it continuously while cooling; add the spirit, and continue to beat it in the same manner until it has acquired the greatest possible whiteness and lightness.

Prepared in this way, cucumber ointment not only possesses the properties of the Parisian article, especially of that manufactured by M. Chardin-Hadancourt, which is generally looked on as the best, but it has also the advantage of keeping perfectly for a long time, in consequence of the aromatic principles communicated to the benzoinated lard by the adoption of my process, principles which seem besides to contribute to the beauty of the product by facilitating the molecular interposition of the atmospheric air it requires to give it the necessary degree of perfection.

M. Pottier, a pharmacien at Auxerre, published in the Repertoire de Pharmacie for 1847[b], a process which would have the advantage of substituting a hydrolat of cucumbers for the spirit of M. Buron, but which did not afford a product capable of being kept so long, although the hydrolat itself may be preserved for several months without change. By applying Appert's process to it we would give it the property of keeping much longer.

The adoption of the hydrolat would be economical, but it would be contrary to true pharmaceutic principles, as it is necessary to avoid as much as possible the introduction of water into fatty matters which we wish to preserve from decay; it is therefore advantageous, in more than one point of view, to employ spirit of a very high density in the preparation of the tincture. It should, however, be observed that the objection raised against the hydrolat loses its force when the benzoinated axunge is employed, for the chances of preservation or alteration are no longer the same as they would be with ordinary lard.

[a] Prepared by heating in a water-bath for two or three hours 120 parts of coarsely powdered benzoin and 3000 parts of lard, straining through linen, and stirring constantly till cold.—Ed.

[b] Page 310.

To those who might object to the presence of alcohol in an ointment such as the present I would say, that after having diligently beaten this product we do not find any trace of spirituous liquid in the mass, as this mass is, in consequence of the total evaporation of the alcohol, only the exact representation of the weight of the lard and stearine combined.

As to the benzoin, I do not think it can give rise to such an objection; the simple fact of its frequent employment as a cosmetic (le lait virginal), not permitting us to attribute to this substance thus diluted other properties than those usually assigned to it, the more so as it here occurs in an extremely small proportion, so small that its employment would not be unreasonable, even if it were considered to be an irritant. I can therefore see in it only an auxiliary, the double utility of which appears to me to be incontestable. —*Journal des Connaissances Médicales Pratiques et de Pharmacologie*, 10th August, 1854, p. 445.

On the Medicinal Action of Iron. By M. Q. A. QUEVENNE, Chief Pharmacien of La Charité. *A very detailed Analysis of the Report read to the Academy of Medicine, at the Meeting of the 22nd August*, 1853. By PROFESSOR BOUCHARDAT.

ADOPTING a perfectly novel course, M. Quevenne, says the Report, in a series of experiments performed on dogs with gastric fistulæ, has endeavoured to elucidate the important problem of the administration of the preparations of iron in combination with the ordinary aliments.

The author has experimented on several dogs, but as the results have always agreed, scarcely any other of these animals is mentioned in the Report save the one designated in the memoir by the name of *Chalyb.* He was tolerably strong, and weighed 16 kilogrammes (rather more than 35¼ lbs., the kilogramme being equal to about 2·2 lbs. avoirdupois).

With the exception of the cases which required a particular diet, the ration of food for each experiment was composed of—

100 grammes of lean boiled beef, cut small: corresponding quantity of dry matter, 41·40.

40 grammes of white bread, of second quality: corresponding quantity of dry matter, 26·24.

150 grammes of broth.

This is what was called the *ordinary mixed ration.*

The duration of digestion for this quantity of food [weighing altogether about nine ounces], was five hours.

The author's principal object has been to solve the following problem:—A ferruginous preparation being ingested with the food, how is the iron brought into the state of solution in the gastric juice?

M. Quevenne has experimentally estimated the influence of the ferruginous product on the degree of acidity of the gastric juice, simultaneously with that of the nature of the aliments ingested, as well as of the addition of various medicines to the preparations of iron.

Several other points have been also examined by him, as the weight of the alimentary matters dissolved by the gastric juice; the passage of the different compounds of iron into the urine; the cause of the black colour of the alvine discharges; the amount of iron in the bile and hair; the comparative properties of the gastric juice in man, the ox, the rabbit, and fowls; the state of oxidation of iron in the gastric juice, the physiological function it discharges in the economy after being deposited in the globules of the blood, &c.

If all these experiments, which were begun in 1847, were reckoned up, they would amount to the enormous number of two thousand or thereabouts.

I. *Results obtained.*—The results of the experiments in question have been given in a series of Tables, which enable the reader rapidly to take in the whole, and the figures of which alone often indicate the conclusions to be drawn. For example, one of the Tables shows that in the digestion of a mixed ordinary ration, to which 0·50, half a gramme, or 7·7 English grains nearly, of the ferruginous preparation to be examined was each time added, there was obtained—

Of iron presumed to be in the metallic state, in 100 grammes (a little more than three ounces) of gastric juice,

With the pulvis ferri, ...	0·0512
With protosulphate of iron, ...	0·0284
With tartrate of potash and iron, ...	0·0110
With red oxide of iron, ...	0·0082

The pulvis ferri had, therefore, introduced much more metal in the state of solution into the gastric juice than the three other products; a circumstance which scarcely agrees with the idea so absolutely entertained, that the preparations of iron which are, by themselves, insoluble (red oxide, black oxide, proto-carbonate, filings, &c.), are less active than those which are essentially soluble.

But the figures quoted above would suggest the idea that this proposition is true in respect to certain insoluble compounds, the red oxide, for example.

Another Table explains this result; we there see that when a solution of a salt of iron (the experiment was made with the potassio-tartrate of iron) is placed in contact with aliments, almost all the metal is precipitated. This precipitate not being insoluble in acids, as MM. Leras, Mialhe, and C. G. Mitscherlich, had each separately already proved, a certain quantity redissolves in the gastric juice.

It hence follows, that in the case of the administration of ferruginous preparations with aliments, whether an insoluble preparation or soluble salt of iron be mixed with the latter, the acid juice of the stomach is called to act on an insoluble matter. In the first case the insolubility is inherent in the product; in the second, it results from the reaction of the food. In each case the quantity of metal dissolved depends both on the proportion of active substance (iron) really existing in the ingested product, and on the degree of solubility of this product, or of the precipitate which it forms in the gastric juice.

Another Table shows the quantity of metal dissolved relatively to each dose of pulvis ferri administered.

The figures of this Table show that the quantity of iron dissolved by the gastric juice, without being proportional to the dose ingested, increases, notwithstanding, considerably with the latter. For example, 0·05 of pulvis ferri introduced into that fluid 0·0138 (13 millegrammes and $\frac{8}{10}$) of metal (in these calculations 100 grammes is the quantity of gastric juice always understood), while 0·50 introduced 0·0512.

We have here again a result which does not agree with the ideas hitherto received, and which were:—

That in the case of insoluble preparations, the dose administered was of but slight importance, as when the gastric juice was once saturated with the medicine, the excess of the latter remained unattacked, and continued to traverse the alimentary canal as an inert body. It was forgotten, in raising the theoretical objection, that we have to do, not with a given quantity of acid fluid contained in a test-glass, but with a phenomenon taking place in the midst of a space bounded by living walls, absorbing in proportion the fluid already charged with the medicinal principle, and simultaneously secreting new quantities of acid, which, in their turn, come into action.

When the ferruginous preparation is one which is with difficulty acted on by weak acids, as the red oxide, the gastric juice becomes charged with so small a quantity, that even when the dose is greatly increased, the augmentation in the proportion of iron dissolved is scarcely perceptible.

Thus, 0·50 of red oxide introduced, as we have already said, 0·0082 of iron dissolved in the liquid in question, while 5 grammes, or ten times more, introduced only 0·0150; and 20 grammes, or forty times as much, only 0·0304.

II. *Influence of the Preparation of Iron administered on the Degree of Acidity of the Gastric Juice.*—It has been *theoretically* said, that the preparations of iron had this disadvantage, that they could be dissolved only by destroying, in a greater or less degree, the acidity of the gastric juice, and that consequently their absorption took place at the expense of that important fluid destined to fulfil another end.

The Tables contained in M. Quevenne's memoir show that in this statement there is, at least, great exaggeration.

In fact, the pulvis ferri and the red oxide, two preparations in themselves insoluble, and acting as base in respect to the gastric juice, have, when employed in therapeutic doses, but slightly diminished the acidity of the fluid.

As to the pulvis ferri, which, in regard to this point, exhibits the most marked effect, the average diminution was only 5 per cent. in one dog, and eight in another (*Chalyb*).

With the tartrate and the double tartrate, likewise administered in therapeutic doses, the degree of acidity remained apparently the same as in the normal state, or underwent but a very slight decrease.

But when, instead of therapeutic doses, the quantity exhibited is greatly increased, the diminution of acidity observed is very decided; and, what is singular enough, it may also show itself in as well marked a manner with the ferruginous salts.

The supposition is admissible, that in these cases the diminution of acidity is not a direct effect of the iron on the fluid itself; but that it is the result of a reflex action of the system produced by the medicine.

III. *Influence of the Kind of Food and of some Medicinal Substances on the Quantity of Iron dissolved by the Gastric Juice, when the Pulvis Ferri is simultaneously administered.*—When instead of the ordinary mixed ration, I gave the dog meat alone and broth, in equivalent quantity (estimated in dry matter)[a] there was a sensible diminution in the proportion of iron introduced in the state of solution into the gastric juice (0·0428, instead of 0·0512).

On the contrary, with bread alone and broth, the proportion of iron introduced into the same fluid was greatly increased (0·0722).

With bread alone, and milk instead of broth, the proportion of iron was still more considerably increased (0·1012).

The addition of chocolate to the ordinary mixed ration had the effect of lowering the amount of iron dissolved to 0·0475, that is to say, a little below that corresponding, as we have seen, to this ration (0·0512).

The same result attended the addition of cinchona bark, and cinnamon.

Wine when substituted for broth in the mixed ration had no sensible influence on the proportion of iron dissolved.

Neither did fresh or melted butter seem to have any effect worth noting.

The addition of citric acid produced a very slight increase in the quantity of iron dissolved (0·0551), while that of bicarbonate of soda and of sulphate of quina had no sensible influence upon it.

As to the acidity, it was found in the majority of the experiments to be a little below the normal rate.

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[a] With the addition of 0·50 (7·7162 grains) of pulvis ferri, as in all the experiments which follow in this article.

The addition which diminished the acidity most was that of the sulphate of quina.

None of the additions to, or modifications of, regimen raised the degree of acidity above the normal standard, not even that of citric acid.

Were we to take into consideration only the figures just quoted, observes the author of the memoir, many results would appear to be contradictory to what we daily observe at the patient's bedside.

Thus, in allowing ourselves to be guided solely by the quantity of iron introduced into the gastric juice, we should be led to regard it as favourable to ferruginous medication to give the preparation conjointly with a diet composed of bread and milk.

In so doing we should evidently pursue a wrong course: no practitioner ever thought of putting an anemic or chlorotic patient (supposing the affections to be unattended with any unusual circumstances, and uncomplicated) on a milk diet at the same time that iron was prescribed.

There is another circumstance which should, according to the author, be taken into consideration, that is, the proportion of protein matters introduced into the economy at the same time as the iron.

In fact, if we estimate the quantity of precipitate formed in the gastric juice in consequence of neutralization by means of carbonate of soda, of a caustic alkali, or even of the serum of the blood, it will be found that the abundance of this precipitate is subordinate, not only to the condition of the presence of iron in the food, but also to the richness of the gastric juice in animal or protein matters, and to various other circumstances of alimentation.

For example, when we neutralize the gastric juice, proceeding from the digestion of an ordinary mixed ration without iron, we have a precipitate which is not very copious.

With the same ration, with the addition of 0·50 of pulvis ferri, the precipitate is more abundant.

With meat alone and broth, and the addition of 0·50 of pulvis ferri, the precipitate is still a little more copious.

With bread alone and broth (0·50 pulvis ferri again added), the precipitate is, on the contrary, but trifling.

When, to the mixed ration with 0·50 of iron, we add analeptic, strengthening or tonic substances, as chocolate, pale bark, cinnamon, the abundance of the precipitate increases relatively by the fact of these additions.

But there is an addition which especially increases this precipitate in a considerable degree,—it is that of wine.

Therefore, and this is the principal conclusion deduced from this part of the author's labours, there would be a coincidence between the abundance of the precipitate formed in consequence of the neutralization of the gastric juice, and the best conditions for the nourishment of chlorotic individuals.

Now, if the effect of the treatment of such patients, and the condition of their cure, consist in the regeneration of the globules of their blood,—and no one, at the present day, doubts this; if the absorption of protein or albuminoid matters takes place directly, by the venous radicles on the surface of the digestive organs, as is shown by numerous and conclusive experiments, and not by the lacteals as was formerly supposed; if these facts are well established, will not the gastric juice, charged, at the same time, with alimentary matters and with iron, find itself, the moment it enters the veins, in contact with an alkaline fluid (the serum of the blood); and may we not then suppose that the latter will produce in it a precipitate of the nature of those just described?

If then, in fact, things are so, we have here, according to the author, the probable origin of the blood globules, the preliminary step which nature adopts to form the latter. This would be a precipitation in the vein itself of albuminoid matters combined with iron (the latter derived naturally from the food, or having been added to it); the precipitate in the form of very fine granulations (about $0^{\text{mm}}\cdot002$) [0·00007874 English inch], would furnish the principal element with which nature was afterwards to form the blood globule, that is to say, the organized and symmetrical particle necessary to accomplish the harmonious assemblage of acts which constitute life[a].

M. Quevenne is the first to observe, that to give a character of certainty to this manner of regarding the mode of action of the ferruginous preparations, it would be necessary to estimate comparatively the iron in the blood of the vena porta, after the introduction of such preparations into the stomach, a thing he has not yet been able to do.

It is true, that Tiedemann and Gmelin, and Brück, say they have proved that iron actually enters in a direct manner into the mass of the blood; but there is so much the more reason, observes M. Quevenne, to desire that this fact should be verified, as the experiments involved are extremely delicate, and the differences to be ascertained are but slight, for the preparations of iron seem to be susceptible of being absorbed only in very small quantities: when given in large doses, if they are naturally soluble, or capable of becoming so, they do not make their way into the system, but exercise a local irritant action on the digestive organs, and produce alvine evacuations or vomiting. The local action, if the dose is still larger, may even go so far (at least in the case of certain ferruginous salts), as to attack the walls of the stomach and intestines (C. G. Mitscherlich).

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[a] With regard to the locality of the formation of the blood globules (in the vascular system itself and not in the lymphatics), and excepting the question of precipitation, of which M. Quevenne speaks in his essay, we should mention that this is the view adopted by M. Bérard, after a critical examination of the various opinions put forward on this subject. (Cours de Physiologie, tom. iii. p. 197; 1851.)

This brings to mind, as M. Bérard himself remarks, the ancient theory which assigned to the liver an important part in the formation of the blood. (Ibid. tom. i. p. 29, and tom. ii. p. 378.)

"All antiquity saw," says Burdach, "that this gland (the liver) receives thus (by the veins of the digestive organs) the product of digestion in order to convert it into blood, and to eliminate, under the form of bile, the materials incapable of undergoing metamorphosis." (Traité de Physiologie, tom. ii. p. 381.)

M. Beau has also written on the same subject, and to the same effect (Archives Générales de Médecine, 1e Série, tom. xxv. and xxvi.)

However, we should observe that M. Mialhe had already suggested, that the therapeutic action of iron ought to be referred to a combination of an oxide of this metal with organic matter, a combination which might itself serve as the basis of the formation of the blood globules.

This author derived the organic matter which was to unite with the iron to form the precipitate, from the serum itself; while M. Quevenne, without denying that this fluid may furnish it, attributes the origin of the protein element of the globules especially to the juice arriving from the digestive organs. This difference is connected with other ideas on the entire process of digestion.

But whatever degree of importance may be accorded, observes M. Quevenne, to the theoretic ideas I have put forward, it is certain that there is a direct relation between the copiousness of the precipitate formed by the neutralization of the gastric juice, and the richness of the latter in nutritious albuminous matters.

Thus: a vegetable diet, which, as is well known, is very little favourable to the reproduction of the globules of the blood, furnishes a gastric juice which gives scarcely any precipitate when it is neutralized with carbonate of soda.

An animal diet, which is much more favourable to the reproduction of the globules, furnishes a gastric juice, yielding a more abundant precipitate with carbonate of soda.

If to this animal diet we add ferruginous preparations, the reproduction of the blood globules is facilitated, and the precipitate by neutralization is increased.

If to the animal diet we add not only preparations of iron, but also analeptic or strengthening substances, and especially wine, the blood becomes richer and richer in globules, while the precipitate formed by the saturation of the gastric juice undergoes a corresponding increase.

And now, if in fact the regeneration or development of the blood globules is so directly connected with the precipitation of a compound of iron and albuminoid matter, the practical conclusion to be deduced would be this: to introduce into the system *moderate quantities of iron*, and at the same time to give the patients a diet in which animal matters and wine predominate. The facts observed would tend to show that corroborants, such as quina and chocolate, are useful adjuvants.

Now, these are principles which have long been established by practical experience, the physiological experiments only explain these precepts, to which they give a more certain character.

The point to which, if the views of the author are correct, especial prominence is to be given is, that it is not sufficient, as some have supposed, in order to produce a cure, to introduce much iron into the economy; the remedy must be combined with albuminoid alimentary matters in judicious proportions, varying according to individual and pathological circumstances.

IV. *Passage of Iron and Iodine into the Urine.*—M. Cl. Bernard has shown that when iodide of iron is injected into the veins in rabbits, the iodine appears very quickly in the saliva and urine; iron is also found in these secretions. But in what proportion does this metal pass through the kidneys? This is the second question which M. Quevenne proposes to solve.

A gramme of protoiodide of iron having been taken by the experimenter himself in the morning in a cup of chocolate, and the urine having been examined every five minutes after its ingestion, it was found that the iodine appeared in the urine after fifteen minutes, interval. (In an experiment in which the salt had been taken fasting, the iodine showed itself in the urine still more quickly, viz., after ten minutes.)

After twenty, twenty-five, and thirty minutes, this substance abounded in the urine, and this continued for the remainder of the day. The next day the proportion of iodine manifestly decreased, and after forty-eight hours the fluid presented but mere traces of it. The entire of the urine passed from the commencement of the experiment having been collected, it was shown that about three-fourths of the iodine ingested had passed in this way, while the quantity of iron carried off with the metalloid amounted only to a few milligrammes for the entire bulk of fluid.

It would thus appear, that when the iodide of iron is administered, a separation immediately takes place in the system between the two elements of the compound; at the end of ten or fifteen minutes the iodine appears in the urine, and passes in it in such abundance, that in forty-eight hours afterwards about three-fourths of the quantity ingested have already been eliminated in this manner, while only a trace of iron has reached the bladder.

V. *Experiments on the Intestinal Matters.*—All that we have hitherto said has reference to phenomena taking place in the stomach. But what goes on in the intestines after the residue of the ferruginous compound has passed the pylorus? This it would be very interesting to know. Unfortunately, the difficulties are much greater in this than in the former case; the study of intestinal digestion in the normal state being much less advanced than that of gastric, and the means of investigation much more difficult.

Not only are we still without completely understanding the nature, which is, moreover, very complicated, of the fluids which moisten the intestines, but physiologists are not even agreed as to the reaction of these liquids, reactions which, besides, vary under different circumstances, and, among other causes, according to the nature of the food.—(Cl. Bernard.)

M. Quevenne has endeavoured to ascertain what reactions would be exhibited by the intestinal matters of a dog, subjected to a kind of food analogous to that which had been employed in the experiments on gastric digestion, a diet which serves, moreover, as the basis of the regimen of chlorotic patients.

Accordingly, a tolerably stout dog (weighing probably about 15 kilogrammes) [a little more than 33 lbs. avoirdupois], was fed morning and evening, for eight days, with a mess composed of 110 grammes of boiled lean beef cut small, 110 grammes of white bread of second quality, also broken into small pieces, and 300 grammes of broth. On the ninth day a double ration was given to the dog for his breakfast, and in four hours afterwards he was killed.

The contents of the alimentary canal were collected in portions corresponding to the principal points of the tube, and examined in detail. The most important results were tabulated. From this Table it is seen that the acidity of the chyme is preserved to a certain degree in the first third of the small intestine; that the alimentary pap becomes neutral in the second third; and alkaline in the last portion. In the cæcum it had again become freely acid, and it was neutral in the remainder of the large intestine.

Some additional facts are mentioned in the Table. We shall content ourselves with giving the conclusions drawn on this subject by the author, and which are the following:—

1. The liquid part of the alimentary pap, which has not disappeared in the stomach, and which has passed the pylorus, appears to be rapidly absorbed in the first third of the small intestine, as the great increase of consistence of the mass in this part would tend to prove. The fluid absorbed in this portion of the digestive canal does not seem to have hitherto undergone much change, and its absorption appears to take place nearly as in the stomach, since it has not as yet entirely lost the fundamental condition of acidity.

2. But soon the new and complex fluids coming from the liver, pancreas, &c., render it, at first neutral, and subsequently alkaline, and place from thenceforward the portion of the ferruginous compound, which has not yet been absorbed, under completely novel circumstances.

3. As to what may concern the tartrate of potash and iron, in respect to which the alkalinity of the intestinal juice has been mentioned as a circumstance favourable to its absorption, it is necessary first to observe, that it is now admitted that this salt is, of all the compounds of iron, that which affords the most abundant precipitate with the gastric juice, that the additional precipitate caused by caustic potash is completely redissolved only by means of a decided

excess of that alkali, and that consequently the state of neutrality is not sufficient.

It would accordingly appear, that there was but one part of the digestive canal here examined capable of producing this result (resolution); the third portion, namely, of the small intestine, in which a very decided alkaline reaction was demonstrated.

Moreover, no direct physiological experiment having hitherto been made on this subject, it would be very difficult to say what takes place in the intestines after the ingestion of this salt of iron; and the same remark applies, of course, to all the others.

VI. *Value of the Pulvis Ferri as a Medicine.*—What is, definitively, the value of this preparation in the treatment of disease? This is the question which especially interests the practitioner: such is the application and the end of all the researches which are connected with the art of healing. It was a very important point to have determined the proportion of iron introduced in the state of solution into the gastric juice by each preparation of iron, and this circumstance is probably that which has most influence on the absorption of the compound by the system.

However, and these are the expressions of M. Quevenne himself, —this knowledge can [not?] in itself suffice to establish with certainty the therapeutic value of each ferruginous preparation.

In fact, we have said that we possess but an imperfect idea of the modifications these agents may undergo beyond the first portions of the intestine, and of the conditions of their absorption in these parts; we know still less what takes place once the medicine has penetrated into the venous radicles surrounding the digestive organs, and when it has consequently been drawn into the most profound parts of the system. It is only by induction that we have been able to establish some theoretic views on this subject.

The attempt to appreciate the therapeutic value of the pulvis ferri from the facility with which it is acted on by the gastric juice, might, therefore, lead to more or less incorrect results.

There was only one mode of removing the doubt we speak of: that was by observation at the bedside, a mode to which we must always resort as a check on our chemical and physiological experiments.

M. Quevenne brings forward in support of his essay observations collected in the cliniques of several hospital physicians, many of them in that of one of the members of the Commission (M. Cruveilhier).

We shall not enter into the details of these observations, but proceed at once to the important points which may be deduced from them.

VII. *Synoptical Resumé of the Observations in the Order of the Facts.*—Eight females are mentioned in whom the characters of chlorosis were authenticated by the physicians at the period of their admission. Two of these patients had at the same time organic affections of the circulating system, and were obliged to be treated with digitaline along with the iron.

1. *Doses.*—The doses of the pulvis ferri administered were in general from 0·20 to 0·30 (from about three to about four and two-thirds grains English). Below 0·20 the cure appeared to progress but slowly,—on the other hand, when the dose was increased to 0·40 and 0·50 (about 6 and 7⅔ grains) the improvements did not appear to proceed more quickly than with 0·30.

2. *Manner in which the Medicine was borne.*—The patients in general bore the medicine well; the greater number experienced no inconvenience from it.

One patient had for several days cramps in the stomach, gastralgia, and even vomiting; another had, at a certain period, pains in the stomach. But as each of these patients was subject to these symptoms, which were attendant on their malady, we cannot attribute them to the iron; they were, besides, but transitory.

3. No tendency was observed in the medicine, in these eight cases, either to constipate or relax the bowels.

4. *Duration of Treatment.*—This varied in the eight patients. Among those who rapidly experienced a decided improvement were two, who, feeling themselves much better after ten and twelve days, chose to leave the hospital before the cure was complete; consequently the duration of the treatment was in these cases without value.

In another case the complete cure required only sixteen days. A former treatment, with red oxide of iron, had occupied five weeks.

In another instance the treatment lasted a month. On a former occasion the red oxide had failed to produce a cure.

Lastly, with respect to the two patients in whom there was at the same time organic disease of the circulating system, which we were obliged to treat with digitaline conjointly with the iron, and in whom former plans of treatment had failed, a cure of the chlorosis was nevertheless attained, but we were obliged to continue the employment of the remedies for a long time (seventy-one days in the most tedious instance).

Such are the results of the experimental portion submitted to the judgment of the Academy.

Each of you, adds the Report, is, perhaps, ready to ask us,—But what is the value of the preparation you speak of, not only considered by itself, but in comparison with the other ferruginous preparations?

Does it, for example, excite the appetite as powerfully as the lactate?

Is it as well borne by the system as the tartrate of iron and potash?

Does it exhibit the more specially tonic action attributed to the oxides of iron in comparison with the salts?

Your Committee, you must be aware, could not raise so extensive a question, which, moreover, the author himself has not entered on.

And then, is this disputed point, on which much patient and time-requiring labour might certainly furnish information which would be very interesting in a practical point of view, susceptible of being elucidated in such a manner as to lead to a positive conclusion? This seems to us to be doubtful.

In fact, many reasons induce us to believe that ferruginous preparations, the mode of action of which is so intimately connected with that of aliments, are circumstanced like the latter, in reference to the facility of assimilation: one person digests mutton or beef better, the greater number white meats; others more easily assimilate the nutritious elements of fish, &c.; the hygienist and the practical physician here find a subject of constant study, in which idiosyncrasies and pathological conditions are to be taken into account; but all these substances furnish the digestive fluids with an azotized matter of analogous composition, all these substances nourish, as all the preparations of iron (with very few exceptions) cure chlorotic patients: in both cases it is a question of comparison; this is the rule stated generally.

But we must not lose sight of the fact, that there are some individuals who bear certain preparations of iron badly, while others of these compounds are very successful with them; just as we see persons who are not able to digest and assimilate certain aliments waste away at length if necessity obliges them to continue their use, and only recover their former health when they can return to their favourite kind of nourishment.

The Report briefly describes the preparation of iron reduced by hydrogen which is now generally known, and which we, therefore, think it useless to repeat; a pharmaceutical formula for using the product is also given. This is a formula for chocolate tablets, each containing 5 centigrammes (rather more than three-quarters of a grain) of the pulvis ferri. They are prepared in the same manner as tablets (dragées), are usually made.

The author advises that this medicine should be employed either as it occurs, or in the form of chocolate tablets, such as we have described.

VIII. *Resumé, Corollaries, and Conclusions.*—1. Iron reduced by hydrogen (pulvis ferri), is, among the preparations examined, that which for a given weight introduced most iron into the gastric juice.

2. The distinguishing feature of this, among the ferruginous preparations, is its degree of relative activity.

The dose of 0·20 to 0·30 (mean 0·25 = four grains nearly) appears to be in general sufficient to produce cure as rapidly and as completely as the compounds of iron hitherto reputed the most active, although in many cases we may, without inconvenience, give so much as 0·40 and 0·50—(about 6 to about $7\frac{3}{4}$ grains).

3. The facts observed overthrow the general proposition hitherto stated, namely, that the preparations of iron, which are in themselves insoluble, are less active than the soluble salts of this metal. If this proposition be true, with respect to the red oxide of iron,

it is by no means so of other insoluble preparations, the pulvis ferri for example.

4. It is not more correct to attribute to the insoluble preparations of iron the serious inconvenience of neutralizing the gastric juice, and so injuring digestion (a theoretic objection). Experiment has shown that there was in this case only a very slight diminution of acidity, and there is no proof that this is hurtful. Perhaps it may sometimes be even useful.

5. When the iodide of iron is administered there is an immediate separation between the two elements of the compound: the iodine passes with great rapidity into the urine, where it appears in ten or fifteen minutes after ingestion, while the iron is retained in the system, a mere trace of it being demonstrable in the contents of the bladder.—*Gazette Hebdomadaire de Médecine et de Chirurgie*, August and September, 1854, Tome I., pp. 778 and 819.

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